15c

The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

THE WEEK'S NEWS INTERPRETED

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VOLUME 80 FEBRUARY 10, 1936 NUMBER 9

The World's Most *DURABLE* Wire Line

—IN THE WORLD'S MOST "*DURABLE*" OIL FIELD

This photograph was taken near the birthplace of the world's first big oil field, a few miles from Limestone, New York. In 1868 Job Moses drilled a well near Limestone which produced some oil. Little was done in the area, however, until the Butts Well below Tarport proved the real beginning of the Bradford Field. The early development of this famous field was confined to the Tuna Valley between Bradford and Limestone.

While somewhat late in being introduced in the Bradford Field, UNION Wire Lines are rapidly becoming popular in this field. This great field, still a big producer after 68 years,—and UNION Lines,—have one thing in common—amazing endurance. UNION Lines are designed especially for extra endurance under oil field conditions.

The photograph was taken on a Nichols Run Oil Company lease. The men, left to right, are: E. L. Wells, teamster; K. O. Bickell, roustabout; L. D. Fargo, roustabout; R. B. Conrad, tool dresser; J. E. Humphrey, Union Wire Rope Corp.; C. L. Pfouts, driller; H. W. Murray and Jack Ainsworth, of the Keystone Driller Co.

THE AMAZING RECORD of the BRADFORD FIELD

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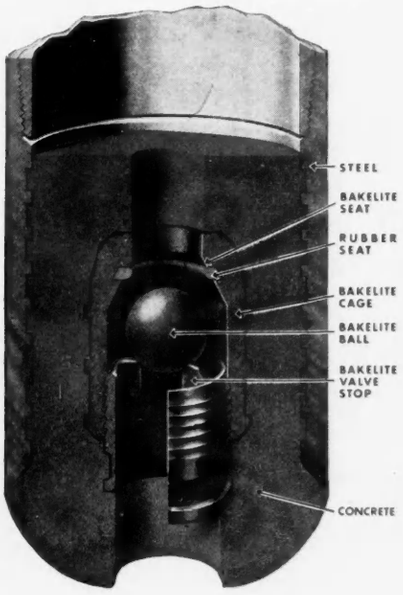

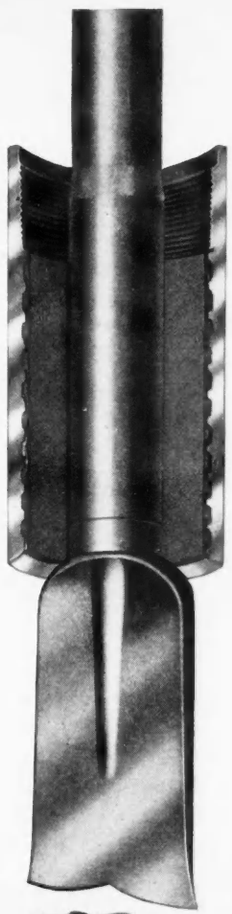

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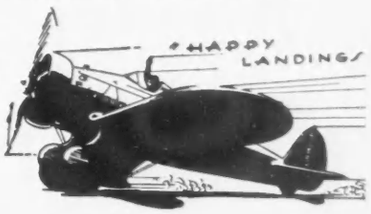

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THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

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PUBLISHED BY
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

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Contents « February 10, 1936

Volume 80, Number 9

THIS WEEK 7

THE CHANGING PANORAMA 13

GENERAL NEWS:

Spacing Decision—Court Denies Permit for Closely Spaced Texas Wells 8

Oil Production Up—Bureau Sets U. S. 1935 Output at 993,942,000 Barrels 9

The Oil Man's Burden—High Taxes Robbing Both Consumer and Industry 16
By BAIRD H. MARKHAM

Men in the Industry's News 15

Squeaks From the Bull Wheel 88

ENGINEERING AND TECHNICAL:

U. S. Crude Reserves Enlarged During 1935..... 19
By WARREN L. BAKER

Portable Gas Engine Rig—Shallow Wells Drilled With Small Fuel Cost 24
By JOHN C. ALBRIGHT

Rodessa a Big Reserve—Present Field Limits Indicate Big Recovery With Additions Very Likely..... 28
By BRAD MILLS

The Testing of Oil-Field Boilers..... 36
By E. F. DAWSON

Warping of Formations Along Gulf Coast Makes Gravity Survey Desirable 48
By CYRIL K. MORESI

MARKETS AND STATISTICS 51

WORLD DEVELOPMENTS 56

FIELD REPORTS 59

NEW PRODUCTS AND EQUIPMENT NEWS 86

SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

BRANCH OFFICES

NEW YORK.....250 Park Ave.
PITTSBURGH.....Standard Life Bldg.
CHICAGO.....332 S. Michigan Ave.
LOS ANGELES.....Haas Bldg.
TULSA.....Hunt Bldg.
FORT WORTH.....W. T. Waggoner Bldg.
WASHINGTON.....Albee Bldg.

Member Audit Bureau of Circulations.

Published every Monday. Single Copies 15 cents. Subscription price: domestic and foreign, $2.00 a year. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies.

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Actual records, not claims, tell the story of the Parkersburg Long Stroke Pumping Unit. Here are some typical performance records.

- *Brea, California:* Produces 620 barrels of fluid daily from 5100 feet at less than 5% of the cost of gas-lift, which it replaced.
- *Oklahoma City Field:* Operating at 10—132" strokes per minute, it is producing 475 barrels of oil daily from a depth of 6500 feet.
- *Mt. Pleasant, Michigan:* Increased oil production 63.6% and total fluid 47%. Decreased rod load 27.5% and number of rod reversals 55%. Operated for 133 days without a rod failure.
- *Texas:* Produced 936 barrels of oil from 2350 feet through 3" tubing—an increase of 24% over previous production with conventional type pumping equipment.

Facts like these eliminate guesswork and definitely demonstrate the advantage of a long, slow pumping stroke. If your present equipment isn't doing as well or better it's time to investigate the Parkersburg Long Stroke Unit. Write today for the complete story.

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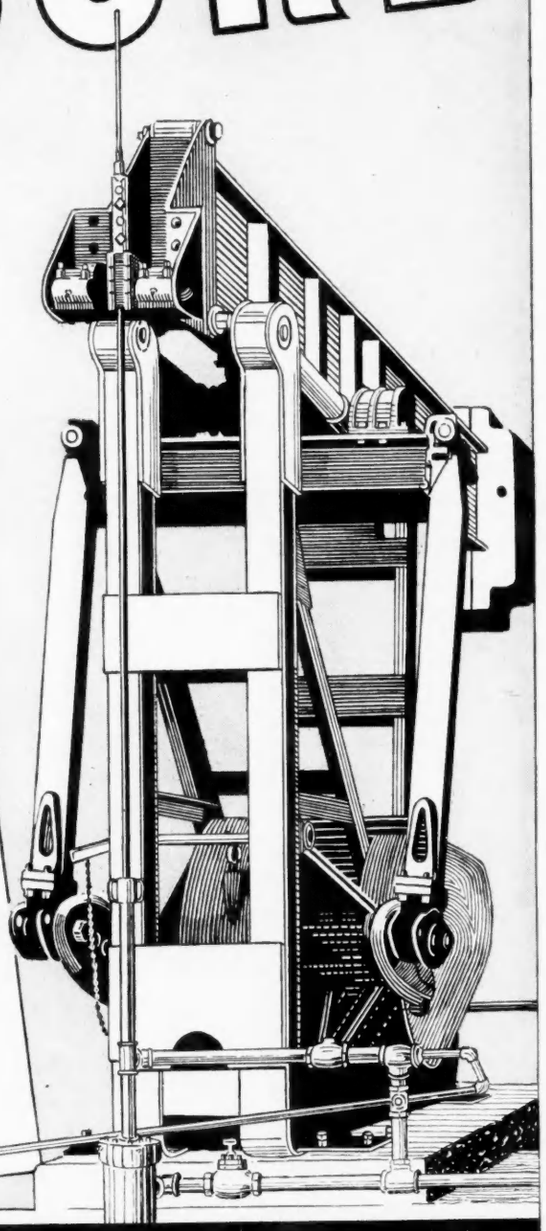

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THE OIL WEEKLY

FOR OIL AND GAS PRODUCERS
AND PIPE LINE MEN

ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor.

. . . this Week

MORE crude reserves were found in the United States during 1935 than oil produced, and future recoverable petroleum known to exist in underground reservoirs now totals 12,992,000,000 barrels. This is the conclusion drawn from a recent study of the situation by THE OIL WEEKLY, which showed that 1935 discoveries brought to light 1,810,000,000 barrels of oil while the nation was producing 995,000,000 barrels. As a result reserves were advanced 815,000,000 barrels above the 12,177,000,000 estimated crude reserves in the nation on January 1, 1935. Moreover, it is of interest that many of the new fields, extensions and new sand horizons found in 1935 are one well pools, and that future development may materially increase the present estimated recovery of these districts. **Page 19.**

UNITED STATES oil production in 1935 was at a near-record total, lacking but 13,381,000 barrels of reaching the all-time record of 1,007,323,000 barrels attained in 1929, according to the Bureau of Mines preliminary estimate. Production last year was 993,942,000 barrels. Withdrawals of crude stocks during the year are estimated to have totaled 22,500,000 barrels. A new record for fuel oil consumption was recorded when demand was 432,556,000 barrels, a gain of 6.3 percent. **Page 9.**

NATURAL gasoline production in the United States during 1935 totaled 1,632,036,000 gallons, an increase of six percent over the previous year, according to the Bureau of Mines. California, with 527,420,000 gallons of natural gasoline to its credit, lead all other states of the Union. Texas was second with 504,160,000 gallons. **Page 10.**

TWO important Texas well spacing decisions were handed down by courts last week. One denied a permit to drill a test where the rig had been skidded a short distance, and the other denied permission for close spacing of a well. **Page 8.**

RODESSA represents one of the nation's major reserves discovered during the past five years. Development to date, which totals 70 completions, has proved an area roughly totaling 4500 acres, with outpost producers actually indicating a greater producing acreage. It is estimated the field, as it now exists, will have an ultimate recovery of 200,000,000 barrels. Geologists are of the opinion that series fields may be found along the fault line, and that the ultimate recovery of the district may by later development be raised to 500,000,000 barrels. The only safe conclusion at this development stage is that it already is a potentially important future oil reserve. **Page 28.**

The Oil Man's Calendar

FEBRUARY

13 — *American Petroleum Institute, Directors, regular quarterly meeting, New York.*

17-21 — *American Institute of Mining and Metallurgical Engineers, New York.*

20-21 — *American Petroleum Institute, Mid-Continent Spring District Meeting, Wichita, Kansas.*

MARCH

19-21 — *American Association of Petroleum Geologists, Tulsa, Oklahoma.*

19-21 — *Society of Petroleum Geophysicists, Tulsa Hotel, Tulsa, Oklahoma.*

APRIL

9-10 — *American Petroleum Institute, Division of Production, Southwestern District, Shreveport, Louisiana.*

11-13 — *Petroleum Industry Electrical Association, Tulsa, Oklahoma.*

13-17 — *American Chemical Society, Petroleum Division, Kansas City, Missouri.*

14 — *American Petroleum Institute, Division of Production, Pacific Coast District, Los Angeles, California.*

16-18 — *National Petroleum Association, Cleveland, Ohio.*

20-25 — *Oil Equipment & Engineering Exposition, Houston, Texas.*

MAY

5-8 — *American Gas Association, Natural Gas Department, Dallas, Texas.*

13-15 — *American Petroleum Institute, Mid-Year Meeting, Tulsa, Oklahoma.*

13-15 — *Natural Gasoline Association of America, Tulsa, Oklahoma.*

16-23 — *International Petroleum Exposition and Congress, Tulsa, Oklahoma.*

21 — *Independent Petroleum Association, Tulsa, Oklahoma.*

22 — *National Stripper Well Association, Tulsa, Oklahoma.*

JUNE

18-19 — *Pennsylvania Grade Crude Oil Association, State College, Pennsylvania.*

NOVEMBER

9-12 — *American Petroleum Institute, 17th Annual Meeting, Chicago, Illinois.*

THE use of insulation for oil field boilers and steam lines effects a considerable saving in heat. A recent test by engineers at the University of Oklahoma has shown definitely that this is the case. Of course, the economic question of the problem must also be answered. **Page 36.**

THE proposal that the government make an absolute gravity survey of all the Gulf Coast states is creating additional interest. There is no question but that the petroleum industry would benefit materially from such work. In Louisiana, for example, this project would provide a means for checking the movement of lands along the coastal district. Recent investigations have proved that the growth of the Mississippi River delta is not only outward but downward as well, and that the warping under the deposit of sediment affects a large region. **Page 48.**

A PORTABLE gas-engine powered rotary rig for shallow wells is so designed the drilling unit, including the two prime movers, is mounted on one skid and the slush pump on another. Thus, making it easy to transport the rig from one location to another with only one truck and a trailer. The skid foundations of the two units bolt together when on location in such fashion as to assure alignment of the chain transmission. Each engine may be operated independently of the other, or compounded to furnish additional power for any operation. Moreover, the fuel cost of the rig is proving economical in drilling wells to 3000 feet. **Page 24.**

Spacing Decision

COURT DENIES PERMIT FOR CLOSELY SPACED TEXAS WELLS

AUSTIN.

THE Federal Court at Amarillo handed down an unusual decision last week in the cases styled Arkansas Fuel Oil Company vs. Reprimo Oil Company, involving a permit for a well in the East Texas field.

Reprimo had one well on five acres and sought a second well to protect one end of the lease from drainage. The commission denied the application, but the District Court permitted the well to be drilled.

In reversing the decision the appellate court said, "Ownership prior to the passage of an ordinance under the police power of sovereignty does not create a vested right free from such police regulations."

"This entire case can be disposed of by answering two questions; (1) Was appellee's property being confiscated . . . (2) Is the drilling of said well necessary to prevent waste?

"It has been said that the *owner is entitled to recover only the approximate amount of oil and gas lying in place under his land.* If appellee is recovering its fair share of oil, either its own or that of another substantially equalling in quantity and market price its own, there could be no basis for its claim of confiscation. That is, we think, what the evidence fairly shows."

"If Reprimo was granted a permit to drill another well, the adjoining land owners would have to drill to the same density to protect their leases because the sand was porous. The drilling . . . would unquestionably cause a low pressure area, reducing the bottom-hole pressure . . . decrease the amount of oil recovered . . . In the latter life of the field, such (dense drilling) would cause infiltration of water . . . If the entire field was drilled to a density of one well to 2½ acres, the ultimate recovery of oil would be considerably reduced.

"Appellee's witness gave as his opinion that the more wells drilled, the more oil would be recovered . . . No facts are given to support it. It is in precise opposition to the terms of Rule 37, of which the Austin court said, 'It has been judicially determined that Rule 37 was in effect an official, authoritative finding that wells in closer proximity producing equally would tend to create waste.'"

DENY PERMIT

Important spacing rule handed down by court

AUSTIN.

IN a decision handed down last week the Federal Circuit Court at New Orleans made an important ruling in the case styled Lon A. Smith versus Haden Merrill.

Merrill was denied a permit for a well, moved the location a short distance, and asked for a rehearing.

When the commission denied this rehearing, Merrill turned to the court seeking relief there, on the ground that the commission had been arbitrary in refusing his request, as the location had been moved, which resulted in a new case.

The court found, however, that the operator was not entitled to a hearing under these conditions, and in the decision handed down they pointed out that:

"The only difference between that case and this is that the plaintiffs simply moved the point at which they sought permission to drill 50 feet further north on the tract. If this could be allowed to avoid the effects of res judicata, the plaintiffs, by continuing their applications to the commission for a permit, could bring as many suits as their counsel would see fit to advise, by simply changing the proposed location of the well a few feet at a time. We are of the view that every element essential to support res judicata is present and said plea should have been sustained."

ARE CURTAILING

California production is down and to go lower

LOS ANGELES.

IT is indicated that daily average production of oil in California will be down to close to 537,000 barrels a day by February 10 or 11, the point which Standard Oil Company of California demanded before it would make any increase in posted price. Production February 5 was down to 596,917 barrels, compared to 674,662 barrels one week previous. Kettleman Hills had been reduced almost 10,000 barrels.

It is understood every field in the state can be expected to conform to new allowable figures, although a controversy between land owners and producers at Dominguez may cause a little trouble in this field. Other fields give all indications of getting into line. There can be expected no improvement in marketing situation until the crude production situation is settled.

HIGHER ALLOWABLE

Louisiana's February oil allocation is increased

NEW ORLEANS.

LOUISIANA'S crude production allowable for February is about 13,000 barrels higher than for January, at 181,050 barrels per day. The February allowable is approximately 40,000 barrels higher than the recommendation of the Bureau of Mines, which was 141,100 barrels daily for February.

The state proration order, signed by Dr. J. A. Shaw, director of the Minerals Division, Department of Conservation, and Robert S. Maestri, Commissioner of Conservation, was featured by a raising of the Rodessa field allowable to 32,500 barrels daily from 20,000 barrels daily in January. The new Rodessa allowable represents a per well allowable of 500 barrels daily for each of the 65 wells in the new Northern Louisiana field. The rest of North Louisiana is permitted 20,000 barrels daily, making a total quota of 52,500 barrels daily for that section of the state. The Gulf Coast fields of the state are permitted 128,550 barrels output daily under the new order.

REVISE ALLOWABLE

Texas allocation raised 6183 barrels per day

AUSTIN.

THE Texas Railroad Commission has ordered increases in several Texas fields to become effective February 1, which results in a total state allowable of 1,073,175 barrels per day, effective on that date. This is 6183 barrels more than was shown in the order which the commission issued on January 21, to become effective in February.

The new East Texas factor of 2.85 percent of the hourly flow of the wells in that field resulted in an allowable of 433,717 barrels per day, which was 1453 barrels more than the amount estimated by the commission in the order of January 21.

Orders issued last week resulted in increases for four fields in the Southwest Texas district. The Greta allowable was raised from 12,930 to 14,930 barrels per day. The allowable for the Dirks field was raised from 3775 barrels to 4680 barrels per day. North Government Wells field was increased from 10,800 barrels per day to 11,763 barrels per day, and the South Government Wells field was raised from 5550 barrels to 6044 barrels per day. This resulted in an increase of 4362 barrels for the district in which these four fields are located.

It is probable that increases resulting from the completion of new wells in Texas during the month of February will add another 8000 or 10,000 barrels per day to the total allowable by February 29.

WATER FLOOD

Permit sought to flood North Texas leases

AUSTIN.

THE Texas Railroad Commission has issued notice of a hearing to be held in Austin on February 15 to take up the application of McCarthy Oil Company, which proposes to flood certain Wichita County leases in an effort to increase recovery. The commission recently granted permission to The Texas Company for a similar project to be carried out in West Central Texas, but this new application is the first attempt to be made in the North Texas district. McCarthy Company has two leases, one of 50 and the other of 94 acres, located in the Oscar Farrish Survey in Wichita County.

STUDY OIL TAXES

Association joins others in fight on unjust taxes

SHREVEPORT.

THE Mid-Continent Oil & Gas Association, Louisiana-Arkansas Division, held a joint meeting of its executive, finance, membership and legal committees in the offices of the association, 1425 Slattery building, January 26. President D. W. Harris presided.

In line with recent meetings of other divisions of the Mid-Continent Oil & Gas Association, this meeting was held for the purpose of studying the industry's oil tax situation and to take steps to present to the public and to public officials the clear meaning and the implications of tax burdens which the industry has been called upon to bear.

A statement of J. D. Collett of Fort Worth, president of the general Mid-Continent Oil & Gas Association was read. President Collett said "that a staggering load of taxes already was being taken from the industry, and he said others would be taken unless the industry made its position known. He declared that 52 percent of all the tax revenue in Texas is now taken out of the oil industry and that crude and its products, and the corporations and individuals engaged in it are now paying 191 different taxes. Of these, 38 levies he listed as federal, while the remainder were divided between state, county, district, and municipal. From 1921 to 1935, inclusive, he said, the oil industry, with $11,000,000,000 of money belonging to the invested public engaged in the business, the total tax collections were in excess of $7,000,000,000, while the industry earned only $2,500,000,000 for its investors over the 14 years. He told the oil men that Texas had a deficit at the last account he had seen of about $14,000,000, and that the new pension legislation would add $15,000,000 to $25,000,000 more to expenses, and that the oil industry would be a shining mark for those who wished to shift additional taxation from themselves."

W. Henry Rector, Little Rock, Arkansas, said he was amazed at the facts set forth in President Collett's statements and that he believed the public would be astonished also to find this very important industry of this section and of this state was carrying such a heavy tax burden.

Discussion brought out the fact that Louisiana has the only severance tax of its kind in the country, i.e., one based upon gravity instead of upon market price or upon a flat rate. It was pointed out that this peculiarity was productive of a great deal of confusion as to the effect of the tax upon the revenue of the producer, landowner, royalty owner, and others directly connected with the industry, and that this confusion was detrimental to the welfare of the industry, and, therefore, to the tax revenue which the state looks for from the industry.

As proof that a gravity basis for the tax is illogical, example was cited of the fact that Rodessa high gravity oil carried the highest severance tax and yet sold at a lower price per barrel than oils of a lower gravity in competition with it. By resolution the joint meeting authorized the appointment of a committee to make a special study of this and other tax problems.

A. P. I. MEETING

Interesting program is to attract many men

WICHITA.

THE Spring Meeting of the Mid-Continent Section, American Petroleum Institute, to be held in Wichita February 20 and 21, is expected to attract an attendance of 2000 members and visitors from Oklahoma, Texas, Arkansas and Kansas. Papers that have been announced definitely are:

"Trends of Surface Pumping Equipment in Mid-Continent Fields," by J. S. Montgomery, Phillips Petroleum Company, Bartlesville, Oklahoma.

"Dynamometer Tests Indicate Present Pumping Methods Subject Sucker Rods to Unnecessary Loads," by J. F. Eaton, Jarecki Manufacturing Company, and H. D. Collins, Gypsy Oil Company, Tulsa.

"Gas Repressuring in Eastern Kansas," N. M. Hutchinson, Empire Oil & Gas Company, Oil Hill, Kansas.

"Power Equipment for Drilling Operations," by W. C. Dryer, Westinghouse Electric & Manufacturing Company, Dallas, Texas.

"Present Producing Methods in the Oklahoma City Field," by Fred Lichtenheld, I. T. I. O., Oklahoma City.

"Salt Water Disposal," by R. C. Mitchell, Kansas State Board of Health.

Several additional papers will be announced before the meeting.

OIL PRODUCTION UP

Bureau sets U. S. 1935 output at 993,942,000

WASHINGTON, D. C.

OIL production in the United States last year reached a near-record total of 993,942,000 barrels, an increase of 85,877,000 barrels over the 1934 output of 908,065,000 barrels and but 13,381,000 barrels under the all-time record of 1,007,323,000 barrels in 1929, it was reported February 5, by the Bureau of Mines.

Output in December increased in total from 86,476,000 barrels in November to 88,711,000 barrels, but the daily average declined 21,000 barrels from 2,883,000 barrels to 2,862,000 barrels, the bureau announced. Production and average, however, were both above December, 1934, the former by 13,914,000 barrels and the latter by 449,000 barrels. The average daily production for the year was 2,723,000 barrels against 2,488,000 barrels in 1934.

Among the states, the report showed, daily average production in Texas and California showed little change; Oklahoma showed a decline of about 15,000 barrels, and California reached the highest average since February, 1930, at 678,300 barrels. Louisiana continued to set new production records as daily output at Rodessa rose from about 10,500 barrels in November to about 17,000 barrels in December.

Stocks of crude oil continued to de-

Supply and Demand of All Oils

(Thousands of barrels of 42 gallons)

	December, 1935	November, 1935	December, 1934	Jan.-Dec., 1935	Jan.-Dec., 1934
New Supply:					
Domestic production:					
Crude petroleum	88,711	86,476	74,797	993,942	908,065
Daily average	2,862	2,883	2,413	2,723	2,488
Natural gasoline	3,654	3,598	3,263	38,858	36,556
Benzol*	192	178	131	1,877	1,708
Total production	92,557	90,252	78,191	1,034,677	946,329
Daily average	2,986	3,008	2,522	2,835	2,593
Imports†:					
Crude petroleum:					
Bonded warehouses	211	222	636	6,635	4,863
For domestic use	3,125	2,020	2,563	25,604	30,695
Refined products:					
Bonded warehouses	1,055	919	973	12,128	10,054
For domestic use	663	321	715	8,309	4,882
Total new supply, all oils	97,611	93,734	83,078	1,087,353	996,823
Daily average	3,149	3,124	2,680	2,979	2,731
Decrease in stocks, all oils	3,486	1,669	5,891	22,448	37,848
Demand:					
Total demand	101,097	95,403	88,969	1,109,801	1,034,671
Daily average	3,261	3,180	2,870	3,041	2,835
Exports:					
Crude petroleum	4,098	4,289	2,437	51,378	41,127
Refined products	7,512	8,116	6,144	76,774	73,380
Domestic demand:					
Motor fuel	33,734	35,956	30,581	432,556	407,106
Kerosene	5,081	4,724	4,761	47,652	44,234
Gas oil and fuel oil	38,351	30,615	33,594	352,712	331,989
Lubricants	1,433	1,576	1,391	19,598	18,484
Wax	75	80	60	930	857
Coke	624	614	675	6,724	7,540
Asphalt	831	1,037	589	16,384	13,924
Road oil	239	273	129	6,832	6,378
Still gas (production)	4,102	4,041	3,790	50,224	44,393
Miscellaneous	205	154	219	2,087	2,126
Losses and crude used as fuel	4,812	3,928	4,599	45,950	43,135
Total domestic demand	89,487	82,998	80,388	981,649	920,164
Daily average	2,887	2,767	2,593	2,689	2,521
Stocks:					
Crude petroleum	314,631	315,558	337,254	314,631	337,254
Natural gasoline	3,698	‡3,917	3,740	3,698	3,740
Refined products	223,371	225,711	223,356	223,371	223,556
Total, all oils	541,700	545,186	564,350	541,700	564,350
Days' supply	166	171	197	178	199

*From Coal Division. †Imports of crude as reported to Bureau of Mines; imports of refined products from Bureau of Foreign and Domestic Commerce. ‡This figure should be 3,920; corrections in demand will be made in final report.

Production of Crude Petroleum by States and Principal Fields

(Thousands of barrels of 42 gallons)

	Jan.-Dec., 1935	Jan.-Dec., 1934
Arkansas	10,973	11,182
California:		
Huntington Beach	15,133	15,006
Kettleman Hills	27,607	21,390
Long Beach	26,563	22,788
Santa Fe Springs	16,159	14,663
Rest of State	122,370	100,458
Total California	207,832	174,305
Colorado	1,549	1,139
Illinois	4,305	4,479
Indiana	757	838
Kansas	54,787	46,482
Kentucky	5,255	4,860
Louisiana:		
Gulf Coast	40,317	23,794
Rest of State	9,552	9,075
Total Louisiana	49,869	32,869
Michigan	15,256	10,603
Montana	4,594	3,603
New Mexico	20,586	16,864
New York	4,237	3,804
Ohio:		
Central and East	3,163	3,258
Northwestern	907	976
Total Ohio	4,070	4,234
Oklahoma:		
Oklahoma City	54,359	62,829
Seminole	47,509	38,183
Rest of State	83,480	79,095
Total Oklahoma	185,348	180,107
Pennsylvania	15,830	14,478
Texas:		
Gulf Coast	64,323	60,155
West Texas	55,289	50,272
East Texas	175,918	181,540
Panhandle	21,326	20,280
Rest of State	74,241	69,269
Total Texas	391,097	381,516
West Virginia	3,903	4,095
Wyoming:		
Salt Creek	6,252	6,520
Rest of State	7,398	6,036
Total Wyoming	13,650	12,556
Other	44	51
Total United States	993,942	908,065

cline, but at an increasingly slower rate, it was stated, and withdrawals in December were 927,000 barrels, while for the year they were approximately 22,500,000 barrels.

Reflecting the influence of an unusually heavy fuel-oil demand, the average recovery of gasoline from crude declined from 44.2 percent in November to 44 percent in December. Domestic demand for fuel oil during the month was 33,734,000 barrels, or 10.3 percent above the same month in 1934. The domestic demand for the year, as indicated by preliminary figures, was 432,556,000 barrels, a new record and a gain of 6.3 percent over 1934.

Exports Up

Exports of motor fuel continued to run counter to the usual seasonal trend, the bureau reported, the December total of 3,243,000 barrels being nearly double that of the corresponding month of 1934.

Stocks of finished and unfinished gasoline increased by 4,647,000 barrels during December and totaled 56,693,000 barrels as the year closed.

"The increase in fuel-oil deliveries, particularly in the eastern states, in December was outstanding," the report commented, "the domestic demand, exclusive of transfers in California, for that month being 38,351,000 barrels, which is 14 percent higher than the domestic demand of December, 1934."

Details of supply and demand for December and for the year, together with analytic data and production by fields for 1935 as compared with 1934, are shown in the accompanying tables.

MORE GASOLINE

Natural gasoline output in 1935 up six percent

WASHINGTON, D. C.

NATURAL gasoline production last year totaled 1,632,036,000 gallons, an increase of six percent over the 1934 output of 1,535,360,000 but 27 percent under the record production in 1929 of 2,233,688,000 gallons, it was reported February 6 by the Bureau of Mines.

December production, the Bureau announced, was 153,468,000 gallons against 151,116,000 in November, but the daily average declined from 5,037,000 to 4,951,000. Stocks at refineries increased from 82,950,000 gallons November 30 to 86,226,000 at the end of the year. But stocks at plants and terminals were reduced from 81,690,000 to 69,090,000 gallons. The heaviest decline in daily output was recorded in the Oklahoma City field, it was said. While daily average dropped in the Panhandle field, the reduction was not enough to indicate any material change in the status of gas conservation in that area.

Production of natural gasoline in the most important states last year was as follows: California 527,420,000 gallons against 506,272,000 in 1934; Texas, 504,160,000 against 466,570,000, and Oklahoma, 379,428,000 against 355,438,000.

Comparative Analyses

(Thousands of barrels of 42 gallons)

	Jan.-Dec., 1935	Jan.-Dec., 1934
Crude Petroleum:		
Runs to stills	966,243	895,636
Motor Fuel:		
Production	465,514	423,801
Imports:		
Bonded warehouses	20	.....
For domestic use	.....	1
Exports*:	30,380	24,686
Stocks:		
Gasoline	50,647	48,205
Natural gasoline	3,698	3,740
Domestic demand	432,556	407,106
Kerosene:		
Production	55,813	53,855
Exports	6,644	9,781
Stocks	7,915	6,398
Domestic demand	47,652	44,234
Gas Oil and Fuel Oil:		
Production	341,251	326,971
Transfers	13,874	8,382
Imports:		
Bonded warehouses—for supplies of vessels	12,105	8,281
For domestic use	7,558	4,353
Exports	28,489	28,605
Stocks	103,984	110,397
Domestic demand	352,712	331,989
Railroad (Class I)	*42,833	*40,315
Public utility power plants	11,300	10,379
Other	243,234	227,392
Bunker oil—foreign	29,226	28,993
Bunker oil—coastwise	26,119	24,910
Lubricants:		
Production	27,771	26,373
Imports	1	2
Exports	8,480	7,660
Stocks	7,025	7,331
Domestic demand	19,598	18,484
Wax (thousands of lbs.):		
Production	450,240	468,720
Imports:		
Bonded warehouses	406	3,543
For domestic use	19,260	33,749
Exports	230,933	198,958
Stocks	114,675	136,136
Domestic demand	260,434	240,035
Coke (short tons):		
Production	1,458,000	1,300,000
Stocks	388,900	405,100
Asphalt (short tons):		
Production	3,246,700	2,840,500
Imports (natural)	24,200	15,600
Stocks	405,400	339,200

*Jan.-Nov.

CHANGE STOCK BASIS

WASHINGTON, D. C.

THE Bureau of Mines in its latest report on crude oil stocks, as of January 25, has changed its manner of showing the stocks. In the new form the figures are on a basis comparable with the bureau's monthly figures. That report showed total stocks on the new basis at 313,239,000 barrels as of January 25, a decline of 1,297,000 barrels from the comparable total for January 18.

The Bureau has been publishing these weekly reports since October, 1933, on the basis of reports of crude oil stocks of companies holding 100,000 barrels or more. Since lease stocks and stocks of companies holding less than 100,000 barrels were not covered, the totals have only represented about 95 percent of all refinable crude stocks, which are reported by the bureau in monthly reports. Although the weekly reports were published to indicate current trends as to the balance of supply and demand, some were using them to indicate actual quantities rather than trends. The new reports eliminate such confusion. They raise the weekly totals to a 100 percent basis and are comparable with the monthly figures.

CLARIFY ORDER

AUSTIN.

THE Texas Railroad Commission issued a new order Friday seeking to clarify an earlier order requiring reports from Panhandle wells. The purpose of the reports is to enable the commission to determine whether operators are meeting the limitations of the gas/oil ratio order now in effect in the field.

In an explanatory paragraph the commission pointed out that:

"The gas figure preferred is the actual volume of gas produced from the individual well while the well is operating under normal conditions. The ratio reflected on the 'monthly producers gas/oil ration determination report' will be the producer's statement of the gas/oil ratio at which the individual well is operating to produce its daily allowable." Operators were cautioned to "thoroughly check each determination for correctness."

AFFIRM SENTENCE

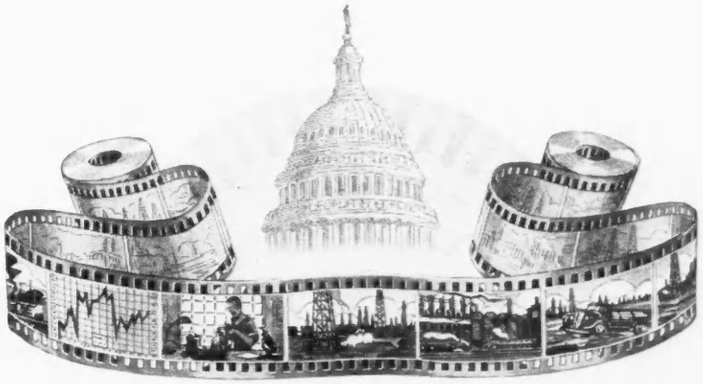
AUSTIN.

THE Court of Criminal Appeals at Austin has affirmed the two-year sentence which was assessed against A. L. Weiss, East Texas Oil operator.

Weiss was convicted by a Travis County District Court of the charge of false swearing.

The charge arose in connection with the affidavit Weiss signed, through which at attempt was made to move 20,000 barrels of oil from the East Texas field.

The Changing Panorama



THE OIL WEEKLY'S COMPOSITE VIEW OF INDUSTRY

Edited by L. J. LOGAN, Associate Editor

THE past few weeks have shown that there were real grounds for the fears felt by some regarding the mid-January price increases of crude oil and refined products.

The gasoline market has failed to hold the broad gains that were made immediately following the crude price increases. Tank car prices of gasoline began weakening in East Texas in the closing days of January, with cold and wet weather and lower demand bringing about a filling up of most available storage. Retail gasoline postings in Texas soon dropped to 14 cents, on the third grade, from 15 and 16 cents. Meanwhile, the whole Mid-Continent tank car market grew unsteady, and retail price cutting was threatened generally east of the Rockies. The crude and refined oil markets already were extremely unsteady or depressed on the West Coast, although determined efforts were being made to unite the California producers in a statewide curtailment program.

Weather Weakens Oil Markets

What some had feared happened. The weather failed to cooperate in the price-raising move. Immediately in the wake of the price increases, from well to service station, came the winter's most unfavorable motoring weather. For successive days, the land was frozen almost from coast to coast, and the ice, sleet, and snow extended from the Gulf of Mexico to the North Pole. In this freezing atmosphere, gasoline consumption contracted, and the new gasoline prices quivered.

When the prices were advanced, there had been some who felt that the increases were premature—that the raises should not be attempted until spring, when larger gasoline consumption would help to take up any slack that might develop in the market. At least to some extent, such a viewpoint obviously has been justified.

In line with the bullish spirit of the times, however, there is considerable disposition to regard the market situation optimistically. After all, it is reasoned, a winter is only a season, and when it comes, spring can't be far behind. Considerable encouragement is gained, also, from the recent developments in California. Producers there apparently are earnest in their present efforts to reduce the state's crude production. They really are trying to curtail the excessive output, since major purchasers have promised to compensate a specified reduction with higher crude prices.

Rodessa Becoming Major Field

Subsequent developments have proved that last summer's anxieties over the embryo Rodessa field were not altogether groundless. Gradually but surely, the area has developed into a major oil field, and it is destined to be even larger and more important. It is a narrow field, so far, with maximum width of a little over a mile. But it is a long field, already proved for six miles along a fault line. And it is still open at both ends. How long it will be ultimately remains to be seen. It already extends southwesterly from Rodessa, Caddo Parish, Louisiana, across the state line into Cass County, Texas. Some are betting with lease and royalty money that it will go on northeastward into Arkansas.

The field is definitely proved for around 5000 oil productive acres. Some are figuring the ultimate oil recovery at 25,000 barrels per acre, which would mean at least 125,000,000 barrels ultimate production already in sight.

However, the fault along which the oil has accumulated extends for miles to the northeast and the southwest. And it is conceded that the present field may extend on for some miles in both directions, or that additional productive spots may be found along the trend, separated from the main Rodessa field by short barren intervals. In view of these possibilities, some of the experts are figuring that Rodessa quite possibly may be a 20,000-acre field and yield ultimately a half billion barrels of oil.

Offers Overproduction Threat

Even while sticking to proved facts, however, it must be recognized that Rodessa is definitely a major oil field. At the same time, it must be conceded that this major field carries with it distinct possibilities of disturbing the peace that the industry has been languishing in for several months. Last summer's

fears about Rodessa have been largely shelved, but they cannot be buried.

Naturally, there are potential difficulties in prorating the field because of its extending into two different states, while it may run also into a third state. There has also been anxiety over how strictly the state of Louisiana, in particular, will be willing to restrict the field. So far, the history of proration in Louisiana has been largely a record of how much oil the producers have wanted to take from their wells. In 1935 the state produced about 50,000,000 barrels of oil, or 53 percent more than the 33,000,000 barrels in 1934. Louisiana collects heavy taxes on crude production, having the highest rates of all the oil producing states. The tax ranges from four cents a barrel for low gravity oil up to 11 cents a barrel for high gravity crude. Rodessa produces high gravity oil. There are some who figure the state authorities will be reluctant to lay a heavy hand on production that means important money in the public coffer.

But Orderly Development Continues

There is, however, a more cheerful aspect, also, of the Rodessa picture. The field as developed so far is largely in the hands of a few major and independent operators, who presumably will be content to produce their properties conservatively. Extensions may bring in additional operators, large and small.

While Louisiana later may be more generous than generally desired with allowables, there is not yet any alarming production at Rodessa. Effective February 1, the wells there were given an allowable of 500 barrels per day each. There were 65 oil wells in the field, which therefore had a total allowable of 32,500 barrels daily. It is contended by some that this is not an unreasonable output for a flush field, particularly considering the costs of drilling to the 6000-foot Trinity pay lime, through some formations that are hard to drill, and with high pressures involved. A new field has a right to a place among the country's producing areas, it is reasoned; and such a field at present has the advantage of a situation in which the consumption of petroleum is increasing. The rising demand helps to absorb the output of the new fields that appear on the scene.

Equipment Business Stimulated

Although it involves the overproduction threat for the oil industry, the Rodessa field means brisk business for the drilling equipment people. There are about 40 rigs running in the field. Sound equipment is needed, because of the high pressures and some hard drilling. The reservoir pressure is around 2700 pounds. The field is adjacent to a paved highway, and wintry weather has not interfered greatly with development work.

Along with the drilling there has been an expansion of the pipe line outlets for the field. The six-inch line that Magnolia Pipe Line Company is building will be the third trunk line outlet for Rodessa production. The field already is served by pipe lines of Standard Pipe Line Company of Louisiana and Gulf Refining Company. Also, some of the crude is moving to Shreveport by tank car over the Kansas City Southern Railroad, at a rate of 12½ cents a barrel.

League Studies Oil Embargo

Unpleasant though it may be, the pressure continues against the United States in connection with the oil embargo that the League of Nations contemplates invoking against Italy. A committee of experts of the League, working at Geneva on a report on the matter, is expected to assert that an oil sanction is practicable if the United States restricts its exports to Italy to the eight percent of Italy's total imports, as in the past. Obviously, the committee must attempt to show how effective the proposed oil sanction would be under the two circumstances: if the United States does or does not impose an oil embargo against Italy.

The men of the League know that it would be one thing to invoke the oil sanction and quite another to execute it. In practical application, there would be numerous difficulties and leaks. It is the job of the above mentioned committee to foresee such difficulties. It is feared, for instance, that non-league members, such as the United States, might lease their own tankers to Italy and then for their own use charter ships from sanctionist countries. It is felt, consequently, that oil tankers would have to be embraced in the embargo program. Study is being directed, also, toward oil ports, in the belief that important leakages through different ports might occur, unless such potential loop holes are plugged. The deliberations also are taking cognizance of the possibilities of fighting back against an oil embargo with substitutes for petroleum.

Italy has taken a realistic attitude, meanwhile, toward the deliberations, and unofficially has warned that an oil embargo would mean a blockade, and that a blockade would be the beginning of a world war.

Shipments to Italy Higher

Figures have been released at Washington showing the value of exports of petroleum and its products to Italy, Italian Africa, and Ethiopia during 1935, as compared with 1934. The figures are substantially higher for 1935 in all three cases. Similarly, December, 1935, showed large gains over December, 1934. The exports to Italy averaged $733,132 worth of oils per month in 1935, as compared with $505,155 a month in 1934, nearly a 50 percent increase. To Italian Africa the oil exports averaged $81,528 per month in 1935, against $410 a month in 1934. To Ethiopia, the exports averaged $1,112 monthly in 1935, against nothing in 1934. In comparing December, 1935, exports with those of December, 1934, even larger gains are seen. To Italy the December, 1935, petroleum exports had a value of $2,296,008, compared with $420,437 for those in December, 1934. To Italian Africa, the December shipments amounted to $306,181 in 1935, against $326 in 1934. To Ethiopia there were no December exports in either 1935 or 1934.

Total Exports Also Increase

Although the increase of exports to Italy has been conspicuous, it should be stated that total oil exports of the United States also were up materially in 1935. Department of Commerce reports reveal important increases in exports of both crude and refined oils. The crude exports increased most notably, aggregating 51,379,382 barrels in 1935, or 25 percent more than in 1934. Gasoline exports were up 23 percent in 1935, totaling 28,369,296 barrels. Gas oil exports were 10 percent higher, aggregating 14,672,420 barrels. Lubricating oil exports were up over 10 percent, at 8,311,359 barrels. On the other hand, fuel oil exports were off about 10 percent, totaling 11,337,400 barrels in 1935; and kerosene shipments were down about 33 percent, amounting to 6,451,613 barrels.

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MEN IN THE INDUSTRY'S NEWS

O. H. POWELL, superintendent of pipe line operations in Texas for Stanolind Pipe Line Company and Pan American Pipe Line Company, with headquarters at Fort Worth, has been appointed state agent for Stanolind Crude Oil Purchasing Company.

R. P. (DOC) PRINCE, president of Prince Brothers Drilling Company, Gladewater, Texas, accompanied by his wife, attended a wild game conference in Washington the past week. Both are known for their hunting skill.

E. H. LEROUX, president of the Oklahoma Pipe Line Company, Standard Oil Company of New Jersey subsidiary, has completed an inspection of company properties in southern Oklahoma.

DR. C. W. TOMLINSON, for many years chief geologist for the Schermerhorn interests and now a consulting geologist in Ardmore, was the guest speaker at a meeting of the recently reorganized Ardmore Geological Society on Tuesday evening, February 4. His paper, "The Major Geologic Features of Southern Oklahoma," was enthusiastically received, especially by a large number of geologists who have recently been transferred into that part of the state and are finding its problems exceedingly difficult.

MARION E. BROCK of Houston, assistant to the executive vice president of Gulf Companies in Texas, was a member of a delegation from Texas to represent the state at a conference called by President Roosevelt early in February at Washington, D. C., to form an organization for the restoration and conservation of wild life.

R. B. ROARK, production manager in the Mid-Continent area for Shell Petroleum Corporation, has announced the creation of two new production divisions in the Southwest. The Kansas division, with headquarters in McPherson, is headed by H. J. Kemler and the Texas Panhandle division, with headquarters in Amarillo, is headed by R. W. Bond.

JAMES S. NOLAND, in charge of proration matters for Barnsdall Oil Company, left early in the week on a business trip to Houston.

CLAREL B. MAPES, general secretary of the Mid-Continent Oil and Gas Association, was the principal speaker at the regular February meeting of the Oklahoma City Chapter, Production Division of the American Petroleum Institute on Tuesday evening, February 4. Mapes discussed the importance of the petroleum industry in Oklahoma, pointing out that 84 percent, or approximately 37,317,000 acres, of the state's area is estimated to be prospective oil territory. The proven area was estimated to be approximately 620,000 acres or only 1.4 percent of the total area.

FRANK R. CLARK, chief geologist for Marathon Oil Company, has returned to Tulsa from Salt Lake City where his mother has been seriously ill.

LOREN F. KAHLE, 32-YEAR OLD NATIVE OF CANADA, HOLDS IMPORTANT POST WITH STANDARD IN SOUTH AMERICA

JOINED COMPANY SHORTLY AFTER GRADUATION IN 1924

LOREN F. KAHLE

LOREN F. KAHLE was born in Toronto, Ontario, December 31, 1903, but did not lose much time getting to the heart of the industry, for the greater part of his elementary and high school education was obtained in Oklahoma City. Academic training for his career as an engineer was obtained in 1920-24 at Iowa State College, from which he took a B.S. degree in mechanical engineering.

Kahle's professional introduction to the oil industry came soon after graduation from college when he obtained employment in the Bayway refinery of Standard Oil Company of New Jersey. In a very short while he was transferred to the general engineering department, devoting his time to inspection of high-pressure stills and cracking coils. Kahle's apprenticeship lasted only a year, for in 1925 he was transferred to Compania Transcontinental de Petroleo, S.A. as an engineer under C. H. Lieb, who was then chief engineer for that organization at Tampico, Tamaulipas, Mexico. After serving two years in this latter capacity, he was made assistant chief engineer, and in 1928 took over responsibilities of chief engineer at Tampico.

In 1930, Kahle was moved to Monterrey, in the adjoining state of Nuevo Leon, to act as chief engineer of Compania de Petroleo Mercedes, S.A. He occupied this post until combination of the Standard Oil Company of New Jersey units with those of the Pan American in 1932, at which time he was moved back to Tampico as assistant chief of Huasteca Petroleum Company. In May, 1934, he rose again, being appointed chief engineer for Huasteca, a position which he held until his recent transfer to Caripito as chief engineer of Standard Oil Company of Venezuela in charge of the general engineering department, a position which is not to be confused with that of chief petroleum engineer, which is still held by J. A. Holmes.

A. I. LEVORSEN, president, and E. C. Moncrief, secretary of the American Association of Petroleum Geologists, have completed a tour of visits to geologic societies affiliated with the association in central and west Texas.

R. A. KING, president of King Royalty Company, one of the largest independent producing units in North Texas, has been elected president of the North Texas Oil & Gas Association. Other officers for the ensuing year include: C. W. Boller, first vice president; C. J. Tucker, second vice president, and Ed. Erwin, secretary-treasurer. Fred Sehmann, who had served as secretary-treasurer since the body was formed in January, 1930, was extended a vote of thanks for handling the affairs of the association during this period.

J. J. O'LAUGHLIN, deputy oil and gas conservation officer in charge of the Seminole district, has been promoted to the position of assistant chief conservation officer, succeeding C. C. Brown, who resigned effective January 1, 1936, to become a member of the Oklahoma Tax Commission. O'Laughlin is a pioneer production, pipe line man and drilling contractor whose experience dates back to the early history of Oklahoma petroleum development. When the new proration law was passed by the Oklahoma legislature in April, 1933, he was considered for the post of chief conservation officer. When Carl Giles was given that place O'Laughlin was given the position of deputy which he has since held.

RICHARD S. TURNER, export manager for Associated Oil Company for the last nine years took office this month as president of the Foreign Trade Association of the San Francisco Chamber of Commerce. Turner has been a member of the executive committee of the Foreign Trade Association for several years and during the last two years has served as vice president. Turner entered Associated ranks in 1920 and is in charge of Associated Oil Company's export activities which includes the company's own distributing plant at Manila, agencies in China, India, Siam, Malay and Dutch East Indies. In Japan the company joint-

[*Continued on Page 50*]

The Oil Man's Burden

HIGH TAXES ARE ROBBING BOTH THE CONSUMER AND THE INDUSTRY

By BAIRD H. MARKHAM,
Director American Petroleum Industries Committee

A Billion Dollars—That's the annual petroleum tax bill. Such a figure probably means little to the typical "man on the street" because most of us have fallen into the habit during the past few years of talking glibly in terms of billions. But it's actually a huge sum — amounting to over 10 percent of all federal, state, and local taxes.

Gasoline taxes make up over $700,000,000, or about three quarters of the total. Since the World War $11,000,000,000 has been collected from gasoline taxpayers, a sum equivalent to one fourth of the total federal, state, and local debt. Enough gasoline taxes are paid each year to meet the interest charges on the federal debt, or to pay all the expenses of the army and the navy.

There is abundant evidence that this heavy tax burden has taken its toll. We in the oil business know that it tends to keep the price of petroleum products at abnormally low levels. The extraordinary decline in the price of gasoline during the past 15 years bears this out. In this period the price of gasoline has declined much more than the prices of such necessities as coffee, sugar, potatoes, flour, bread, milk, butter, and eggs.

It is thus quite evident that *gasoline is cheap; only the tax is high.* Today, for example, only 72 cents out of every dollar the motorist pays the filling station attendant represent the price of gasoline; the other 28 cents are taxes which go to the government.

Industry's Low Earnings

The heavy tax burden is also one explanation why the petroleum industry's earnings over a period of years have been consistently lower than those in most other businesses. This was brought out strikingly in a study made by one of the leading New York banking houses early in 1935. It showed that during 1934 merchandise chain stores earned eight times as much as oil companies; tobacco companies, whose products bear a tax burden somewhat comparable to that of petroleum products earned five times as much; chemical concerns four times as much; and automobile manufacturers three times as much.

Filling station earnings have shown a similar tendency. Studies made recently by the Merchants' Division of the National Cash Register Company and the University of Minnesota showed this. They brought out that, as a general rule, florist shops earn four times as much as filling stations; drug stores three times as much; electric stores and meat markets twice as much; and auto tire and accessory stores slightly more. Of all businesses studied only chain grocery stores earned less than filling stations.

We in the oil business feel this tax burden because it affects us directly. We have it brought home to us every day. But we can't expect to do much about these taxes so long as we work alone.

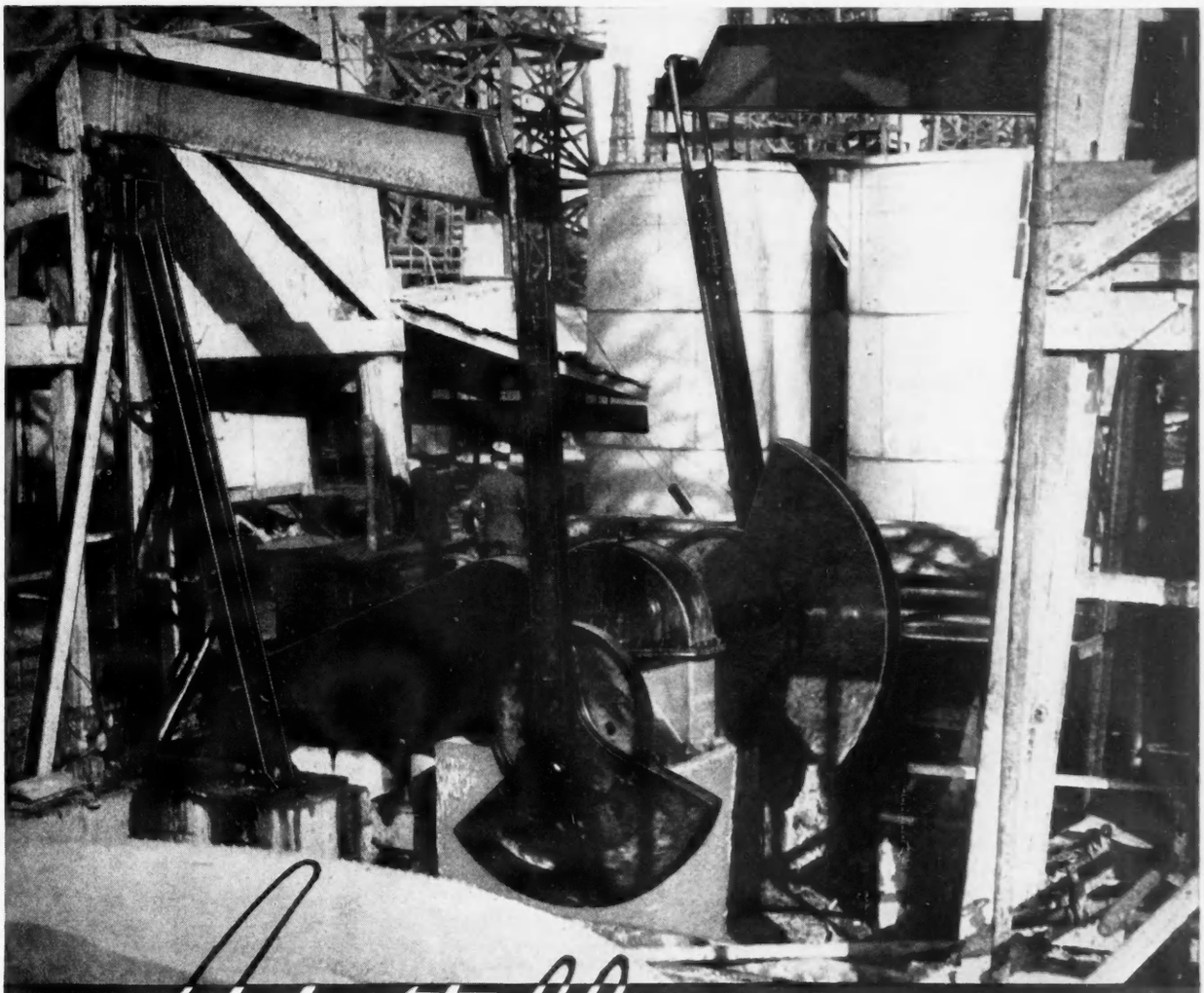
John Public Pays

To the general public petroleum taxes are rather remote and intangible things. If we are to do any lasting good, we must, therefore, tell the public, and show them convincing proof that our tax bill is their tax bill—that although it may appear we pay the taxes, and although the tax collector may collect them from the oil companies, in the last analysis it is our customers and the users of our products who pay them.

When our customers really stop to think about it, they will appreciate that the complicated interplay of economic forces in the modern world often brings taxes to rest on those who least expected to bear them when they were originally imposed.

Today it is a difficult problem to determine who bears a particular tax. A business concern pays the gasoline tax, but the tax may ultimately be borne by the consumer because it is reflected in the price of goods. In the same way, people who ride on buses

BAIRD H. MARKHAM—
The Industry's Tax Crusader



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pay the gasoline tax as part of their fare. People who buy bread likewise bear their share of the baker's gasoline tax.

It so happens that I do quite a bit of traveling. People often ask me why the oil industry is so interested in taxes—particularly the gasoline tax. They usually point out that the money collected from this tax has been used to build roads; that good roads mean more automobiles in use; that more automobiles in use mean more gasoline sold. So they ask me,"Why do you oppose the gasoline tax?"

But, as is true in most cases of this sort, these people are looking at only one side of the picture. We in the oil business are probably as ready as any other group to recognize that the gasoline tax has made possible the excellent system of highways we have in this country, one of the finest in the whole world. I am sure none of us object to a reasonable state gasoline tax when the money is used for highways. But what most of these people fail to recognize is that the gasoline tax does not work out in practice as well as most people think it does.

Diverting Revenues

One difficulty arises from diverting gasoline tax revenues for other than highway purposes. The gasoline tax, as we all know, is levied for the specific purpose of constructing, improving, and maintaining highways. That was the original principle of gasoline taxation, and its observance made it possible for state gasoline tax revenues to grow in comparatively few years from less than $1,000,000 to well over $500,000,000.

None of us will argue the merits or the importance of the purposes for which gasoline tax funds are being used. The only complaint we and our customers, the motorists, have is against the government levying special taxes for one purpose, and then using the money for something else. Those who do not understand the principles involved are, for example, inclined to argue that relief is relatively more important than construction and maintenance of highways. This is really beside the point. The real issue involved is that of refusing or failing to build highways after users of gasoline have paid for them—of throwing highway building, maintenance, and repair men, and all the rest of the vast army of automobile workers out of work merely to provide jobs for someone else under the guise of a dole.

Is there justice in taxing the motorist for roads and then using the money for relief, state buildings, watersheds, and other purposes which should rightfully be paid for by the general public?

Why shouldn't the gasoline tax like the property tax be adjusted to revenue needs? In good years the property tax is lowered; in lean years it is raised. It seldom remains stable. The gasoline tax, on the other hand, is kept at the same rate year in and year out, and when there's no road building to be done, the powers-that-be look around for some other function on which to spend the money.

Tax Evasion

People who ask why our industry objects to the gasoline tax also apparently fail to recognize the serious evils this tax has brought in its wake. For example, I find they know very little about gasoline tax evasion. They are often surprised to learn that the state loses revenue in this way; that motorists are deprived of the roads for which they have paid; that the oil business is faced with the unfair competition and price-cutting of tax evaders; and that tax evasion makes it possible for unscrupulous dealers to make exorbitant profits by pocketing tax money they have collected from unsuspecting motorists.

Most people do not realize how simple the economics of tax evasion are. A 40 percent sales tax is collected on the average gallon of gasoline sold in the United States. By withholding this tax money from the state an unscrupulous dealer can double his profits. Higher gasoline taxes, therefore, mean more possibility of profit in tax evasion. They also increase the cost of administering the tax. As a result, there is a double loss.

Gasoline tax evasion could, of course, be eliminated by enforcing the law to the letter, but considering the large force of men it would take to accomplish this, and the huge amount of money that would have to be spent, it seems obvious that a much more sensible way, and also a more economical one, is to discourage evasion by keeping the tax rate as low as possible.

We oil men know what a serious problem tax evasion is. We know that it leads to price wars which demoralize the gasoline market. But the public doesn't realize this.

Tax evasion seldom comes into the open. Practically the only way it affects the public is through lower gasoline prices, which makes it only natural that it seldom disturbs the public. As a rule, people see only the advantages they gain. They overlook the vicious practices.

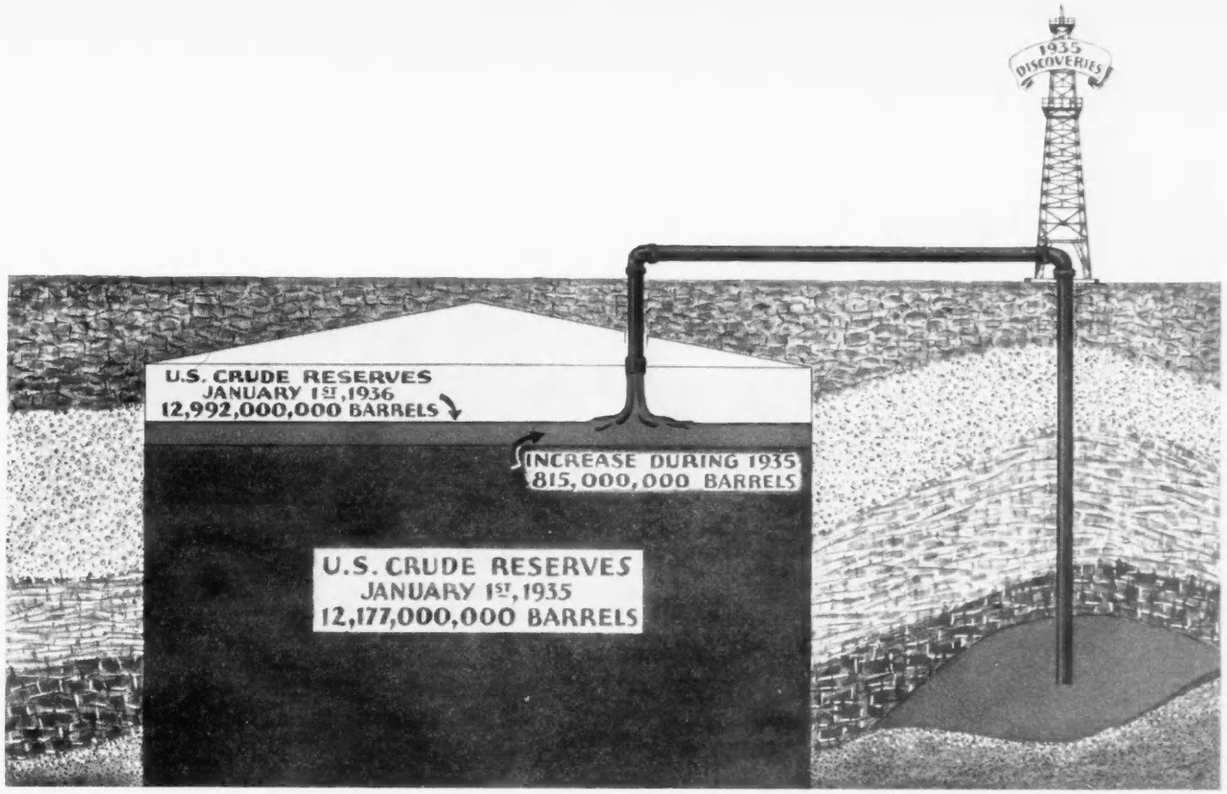
The Industry's Job

It is our job to show the public how gasoline tax evasion encourages these unfair practices; why it means less money for building roads and for keeping them in repair; how it attracts chiselers and racketeers to the gasoline business, and how they prey on the gasoline-buying public.

We must also show the public how gasoline tax exemptions and refunds encourage evasion. People who use gasoline for non-highway purposes feel they are entitled to buy it tax-free, and there is justice in their claim. What they may not know, however, is that unscrupulous dealers by claiming that gasoline is used for tax-exempt purposes are often able to build up a profitable business in gasoline bootlegging. The average user of gasoline wants to pay his fair share of taxes. When he realizes that the state loses much more revenue from false exemptions and refunds than he gains, he is usually willing to forego his claim to them.

Oil men, working alone, can not keep petroleum taxes down. If we are to be successful, we must enlist the support of all users of our products, all people who use goods transported in gasoline-burning vehicles—and practically everyone does. We know how the gasoline tax affects the public and how it affects our business. But we must show the public how it is affected.

Once we have done this, we will have done the public and the industry a real service. We will have made a definite contribution to the movement for lower taxes. At the same time we will be helping ourselves because lower taxes ultimately mean more security for all of us; they mean higher wages, better dividends; they mean taking our business out of the red and putting it in the black. In the last analysis, lower petroleum taxes mean more prosperity for nearly a million workers in the country's third largest industry.



U. S. Crude Reserves Enlarged During 1935

NATION'S RECOVERABLE SUPPLY INCREASED 815 MILLION BARRELS BY NEW DISCOVERIES

By WARREN L. BAKER, Editor

THE United States petroleum industry, present and past backbone supply for meeting the world's day-to-day demand for petroleum and its products, started the year 1936 with a considerably greater volume of crude oil reserves than it had 12 months previous. More drilling activity during 1935, particularly of the exploratory or wildcatting type, resulted in finding 175 new fields, extensions to old fields and new producing horizons in already productive pools. These new strikes are estimated to have discovered 1,810,000,000 barrels of future and heretofore unknown reserves, while the nation was producing 995,000,000 barrels of oil. Therefore, the estimated proved underground supply of crude oil in known United States fields that is extractable by ordinary producing methods in current use was advanced from 12,177,000,000 barrels on January 1, 1935, to 12,992,000,000 barrels on January 1, 1936, an increase of 815,000,000 barrels.

Despite the vast volume of newly discovered reserves no alarm need be felt—unless the difference between yearly production and annual reserves discovered continues to spread farther apart and this process extends over too long a duration. Rather, the finding of a larger amount of reserves than the quantity produced marks the return of the industry to normal. Practically each year since the beginning of the industry has seen slightly more oil discovered than produced. The exceptions are 1929 and 1931, when Kettleman Hills and East Texas added such large volumes of new oil as to cause the difference between reserves and production to be greater than usual, and the years of 1932, 1933 and 1934 when discoveries did not equal production. Thus the return

TABLE 1
Estimated United States Crude Reserves

AREA	Reserves on Jan. 1, 1935*	New Reserves Found in 1935†	Production in 1935‡	Reserves on Jan. 1, 1936
California	3,500,000,000	.....	210,000,000	3,290,000,000
Kansas	400,000,000	50,000,000	55,000,000	395,000,000
Louisiana	375,000,000	300,000,000	50,000,000	625,000,000
Michigan	45,000,000	10,000,000	15,000,000	40,000,000
New Mexico	350,000,000	150,000,000	20,000,000	480,000,000
Oklahoma	1,200,000,000	350,000,000	185,000,000	1,365,000,000
Rocky Mountain	322,000,000	50,000,000	20,000,000	352,000,000
Texas	5,500,000,000	900,000,000	390,000,000	6,010,000,000
Other Areas	485,000,000	.....	50,000,000	435,000,000
Total	12,177,000,000	1,810,000,000	995,000,000	12,992,000,000

Total net increase in U. S. reserves in 1935—815,000,000 barrels.
*From "American Petroleum Industry", published by American Petroleum Institute.
†Estimated by THE OIL WEEKLY with assistance of leading geologists.
‡Figures purposely transposed into round numbers.

of the industry to discovering more oil than it produced during 1935 is as it should be; for proved reserves must be considered as stock stored underground against the time when discoveries do not equal consumptive demand. As the consumption of petroleum and its products has increased, it behooves the industry to carry larger underground stocks than it did ten years ago.

Moreover, it is extremely important to recognize that the estimated 815,000,000-barrel increase in United States' crude oil reserves during 1935 does not represent a year's supply, although the figure approximates the total demand last year. It would be an utter physical impossibility to produce to depletion within one year all the added reserves of 1935. Wells do not flow in such a manner, but show a rather steady decline from their peak daily recovery. Nature makes it necessary that the production of this oil be extended over a long period of years. There are no known means whereby an oil well can be forced to give up all its producible oil in a week, month or a year. Rather, the productive life of an oil well has and always will extend over many years, some as long as 50 birthdays. Although the industry is estimated to have underground reserves of 12,992,000,000 barrels, or a figure equal to the estimated demand for the next ten years, it is misleading to state that the industry has a ten-year supply, because it is physically and mechanically impossible to produce 12,992,000,000 barrels in that time. Therefore, constant new discoveries must be found, and the industry cannot relax in its search for new reserves; else there will occur a shortage within a very few years.

In view of these facts no alarm is felt because reserves found in 1935 exceeded production by 815,000,000 barrels. Moreover, an important lesson may have been learned by oil operators during the past five years; the realization it is advantageous to extend the producing life of a field over a longer period by adoption of conservation measures. If proper practices are employed greater ultimate recovery will result.

Many One Well Fields

Estimation of known crude reserves is uncertain at best. It becomes particularly difficult in valuating new discoveries each year. For example, many of the actually new fields (not extensions) opened during 1935 still had but one or two wells on January 1, 1936; consequently, were insufficiently developed to provide a good basis for predicting future production. In Texas there are the new Turtle Bay field and others, Oklahoma has the Jesse field in Pontotoc County, and Kansas has many fields, etc. For this reason there may be discrepancies proved in the accompanying figures during coming years; however, on the basis of data now available it is felt the appraisals are conservative. Furthermore, differences of opinions always will exist, and all can be supported with good sound reasoning. It is of little actual importance over a long period if the figures here quoted are changed considerably by later developments that give better insight on the productive ability of a field or fields, since a few hundred million barrels makes little difference.

Texas Leads in Reserves

In rating new discoveries during 1935, five districts are shown to have increased their reserve volumes, while four were registering declines (see Table 1). The amount added by the five having gains, however, far offsets the drop in the four not being able to discover as much oil as they produced. It is of importance that four of the five adding to reserves were Mid-Continent states. The only area outside of the Mid-Continent, which includes the Gulf Coast in this study, to enlarge its future producible oil quantity was the three states comprising the Rocky Mountain division, which had a net gain of 30,000,000 barrels. Table 2 shows a tabulation of reserves by natural geographical districts. The conclusion drawn from a study of this table is that henceforth the Mid-Continent and Gulf Coast, and particularly the State of Texas, will play an even more dominating role in the United States petroleum industry than in the past.

The areas having increases were Texas, Oklahoma, New Mexico, Louisiana and the Rocky Mountains, (see Table 1). Those showing declines in future reserves of crude were: California, Kansas, Michigan and unclassified. The latter includes all the remaining producing states of the nation.

It is estimated that Texas, where 11,906 of the 21,132 wells completed in 1935 were located, accounted for half of the added United States reserves. This state was given credit for uncovering 900,000,000 barrels of new reserves, while producing 390,000,000 barrels. As a result, Texas reserves received a valuation of 6,010,000,000 barrels on January 1, 1936, being slightly under 50 percent of the known future reserves calculated to exist in the United States.

Oklahoma followed with the discovery of 350,000,000 barrels of new reserves, which boosted its future supply to 1,365,000,000 barrels from 1,200,000,000 barrels, since production in the state was 185,000,000 barrels during the year.

Next in line was Louisiana, which added 250,000,000 barrels by discovering 300,000,000 barrels and

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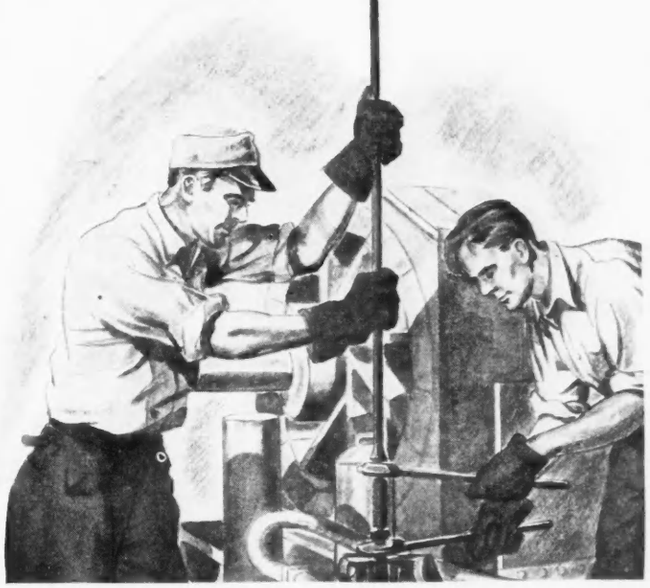

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producing 50,000,000 barrels. This state was given a future recoverable reserve of 625,000,000 barrels on January 1, 1936.

The only other state to discover more than 100,000,000 barrels of new oil during 1935 was New Mexico, which made important advances by adding a gross gain of 150,000,000 barrels and a net increase of 130,000,000 barrels to start the year with 480,000,000 barrels in future reserves. Incidentally, this raised New Mexico to fifth ranking position among the various states, whereas it ranked seventh on January 1, 1935.

Several Large Discoveries

Texas owes its vast increase in future supplies to activity during the year in the Gulf Coast, southwest and west districts. These three sectors accounted for practically all the state's increase. Outstanding among the new fields discovered were Anahuac in the Gulf Coast, Pearsall in southwest Texas and Goldsmith in the western district. These fields were ably assisted by an unusual number of new discoveries, most of which were located in the three named territories, with southwest Texas having the greatest number, but not leading in estimated volume discovered. In this connection, it should be explained that southwest Texas may experience a sharp upward revision of its 1935 discovered new reserves when development gets underway at Pearsall. Without question, Pearsall is of national importance, but development is not sufficient to determine how many acres will be covered. At this time the Anahuac field stands out as the largest Texas discovery of 1935, estimations giving it an ultimate recovery of 300,000,000 barrels, of which approximately 350,000 barrels were produced from March, 1935, to January 1, 1936. A number of Texas discoveries have only a well or two as yet, and their ultimate recovery appraisals may be enlarged by unforseen factors.

Oklahoma reserves were enhanced mostly by work in Pontotoc County. There were two important developments in this county, namely: discovery of Wilcox sand production in the Fitts field and opening of the Jesse field. Another important find was that of deep production in the old Fox pool of southern Oklahoma, but since mechanical difficulties prevented the well being placed on production it is not included in this report. However, the well flowed wild at the rate of 5000 to 15,000 barrels daily, and opened a new trend of play. No doubt it will have important bearing on the reserve situation of Oklahoma during 1936. The Wilcox sand at Fitts probably is the most important disclosure in Oklahoma in 1935. Only a few wells have been completed in this deeper producing horizon, but one of these had a potential of 50,000 barrels, and ranks the field a major strike. Jesse, the other Pontotoc County strike, likewise needs further development before accurate predictions can be made. However, the discovery completion made 12,170 barrels initially and the structure is considered similar to that of nearby Fitts, where a number of productive sands are yielding prolific wells; so Jesse also rates high. The next most important strike was extension of the Oklahoma City field northward.

Louisiana owes its increased reserves to the Rodessa field in the extreme northwestern part of the state. This is the most important strike made in the state in years, and contributed approximately 75 percent of the value attributed to the state's 1935 discoveries. The remainder of the new reserve volume was furnished by the Gulf Coast area of the state.

New Mexico's developments were centered in the southeastern edge, Lea County. The Monument field accounted for 75 percent of the 150,000,000 barrels of new supplies added in the state. The remainder was the outgrowth of four wildcat strikes and extensions to previously productive fields.

Kansas with approximately 50 strikes gained its 50,000,000 barrels of new reserves largely through numbers instead of big discoveries. Many of the new finds are one well fields at present, and the state's reserve volume may have to be adjusted upward after additional development has taken place. The new deep production found in the old Oxford field was Kansas' ranking discovery in 1935.

The Rocky Mountain district obtained its increase in estimated reserves largely from Wyoming, where the Lance Creek new producing zone and discovery of Big Medicine field were the leading developments. Approximately 90 percent of the Rocky Mountain newly found reserves were in Wyoming.

Discovery of the Crystal field in Michigan gave that state its 10,000,000 barrels of new reserves, although there were a few other scattered findings that as yet are unimportant.

The largest decline honor, if it can be called that, went to California, which dropped from 3,500,000,000 barrels to 3,290,000,000 barrels. However, the state maintained its position as the second largest future reserve area in the nation. New California strikes were noticeable by their absence during the year.

Conclusion

Discovery of 815,000,000 barrels more new reserves than produced in the United States last year is not alarming. The oil will come to the surface and subsequently to consuming markets over a period of many years, hence added little to the daily production of the nation. Furthermore, consumption of petroleum and its products during 1936 will be at an all-time peak, requiring a new high production mark. It is necessary that oil companies continue their search for additional underground reserves in order to meet the expected increase in demand.

TABLE 2
Estimated Crude Reserves by U. S. Geographical Districts

DISTRICT	Reserves on Jan. 1, 1935*	New Reserves Found in 1935	Production in 1935	Reserves on Jan. 1, 1936
West Coast	3,500,000,000		210,000,000	3,290,000,000
Mid-Continent†	7,900,000,000	1,750,000,000	705,000,000	8,945,000,000
Rocky Mountains	322,000,000	50,000,000	20,000,000	352,000,000
Eastern States‡	455,000,000	10,000,000	60,000,000	405,000,000
Total	12,177,000,000	1,810,000,000	995,000,000	12,992,000,000

*From "American Petroleum Industry", published by American Petroleum Institute.
†Includes Texas and Louisiana Gulf Coast districts.
‡Includes Michigan.

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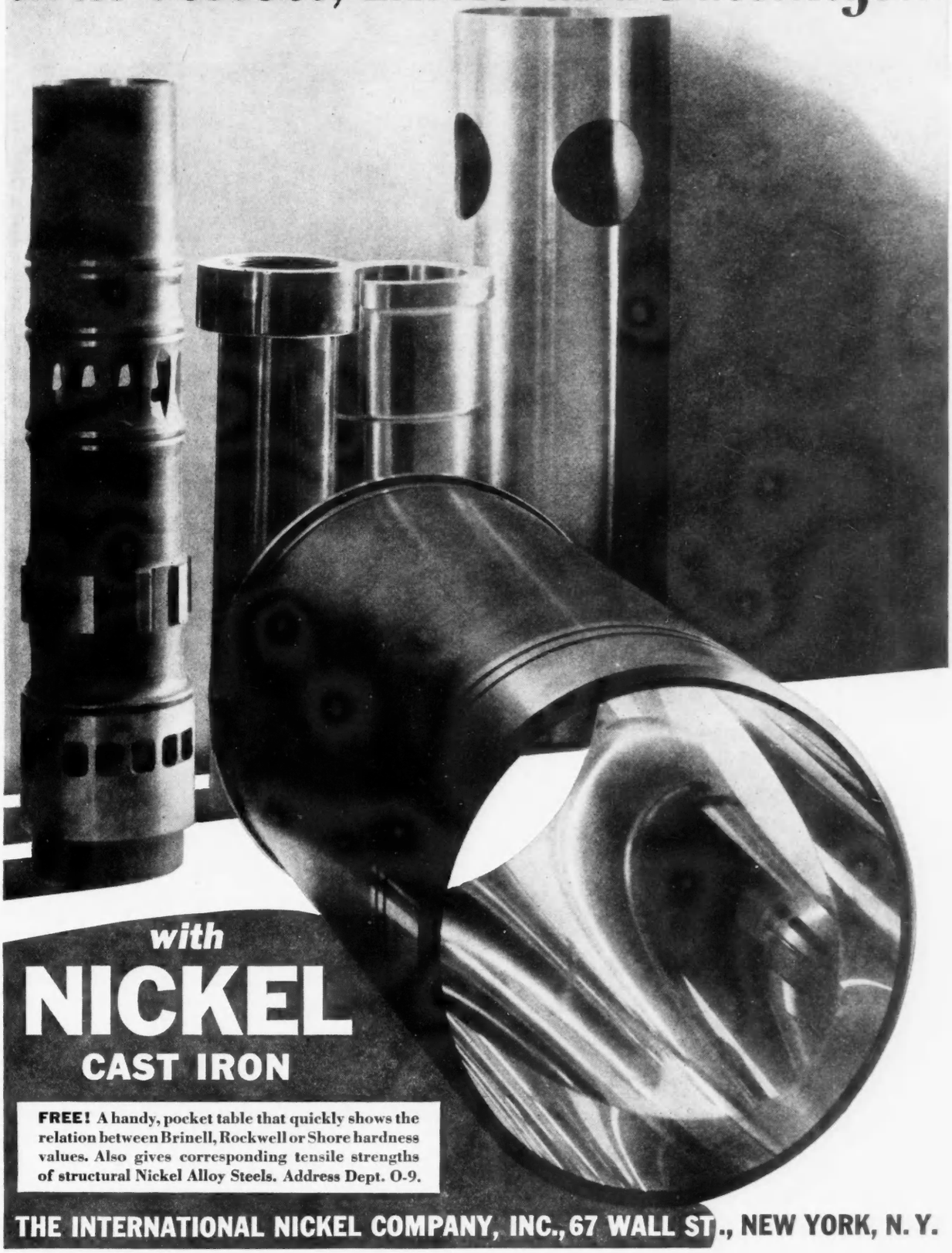

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Portable Gas Engine Rig

SHALLOW WELLS ARE BEING DRILLED WITH A SMALL COST FOR FUEL

By JOHN C. ALBRIGHT

JOHN NUNNELEE, drilling contractor at Cushing, Oklahoma, is using a portable, gas engine powered rig in drilling comparatively shallow tests.

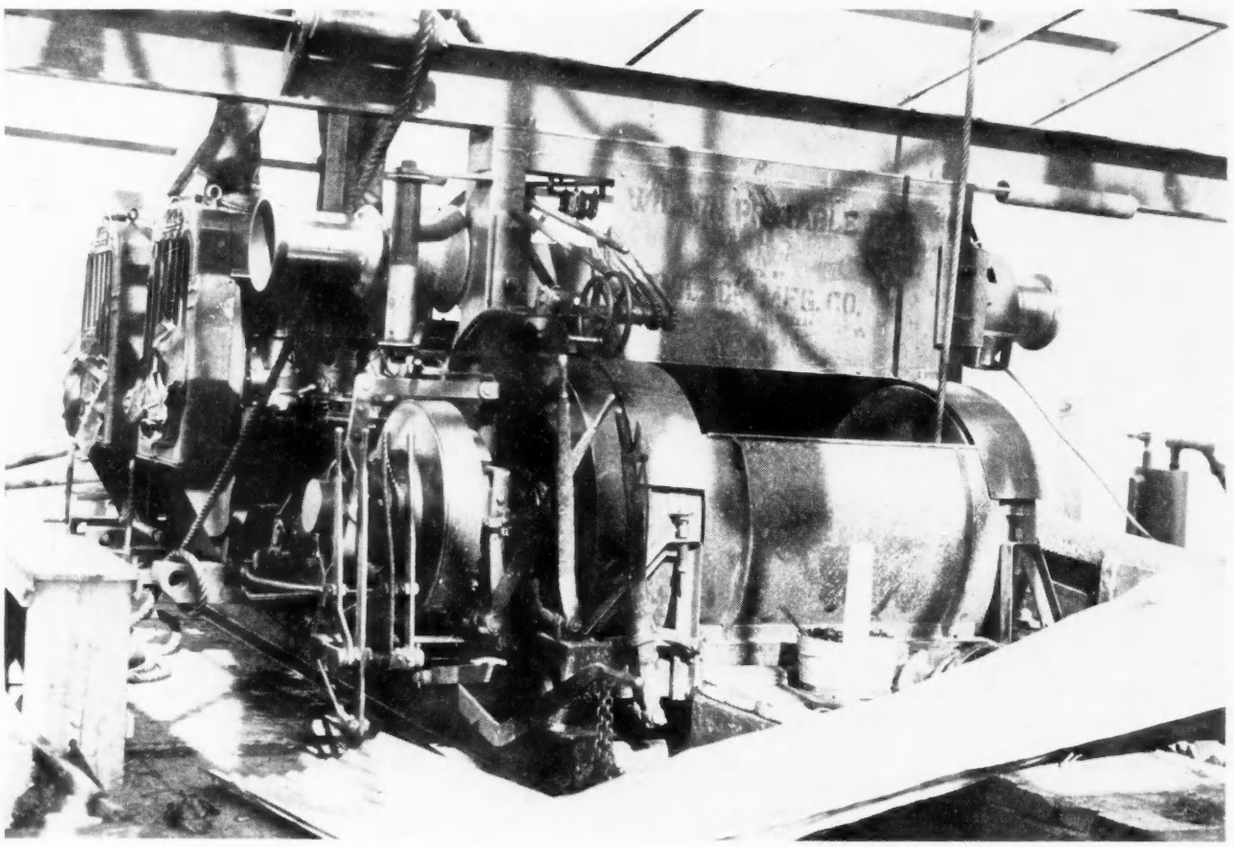
This rig is equipped with two 125-horsepower gas engines, each having a bore and stroke of five inches, 5½ inches respectively. The weight of the drilling unit is approximately 22,000 pounds. The slush pump has a six-inch bore by a 16-inch stroke, and weighs approximately 37,000 pounds. Since the pump and the drilling rig are set on separate foundations, both are easily moved from one location to another by truck and trailer.

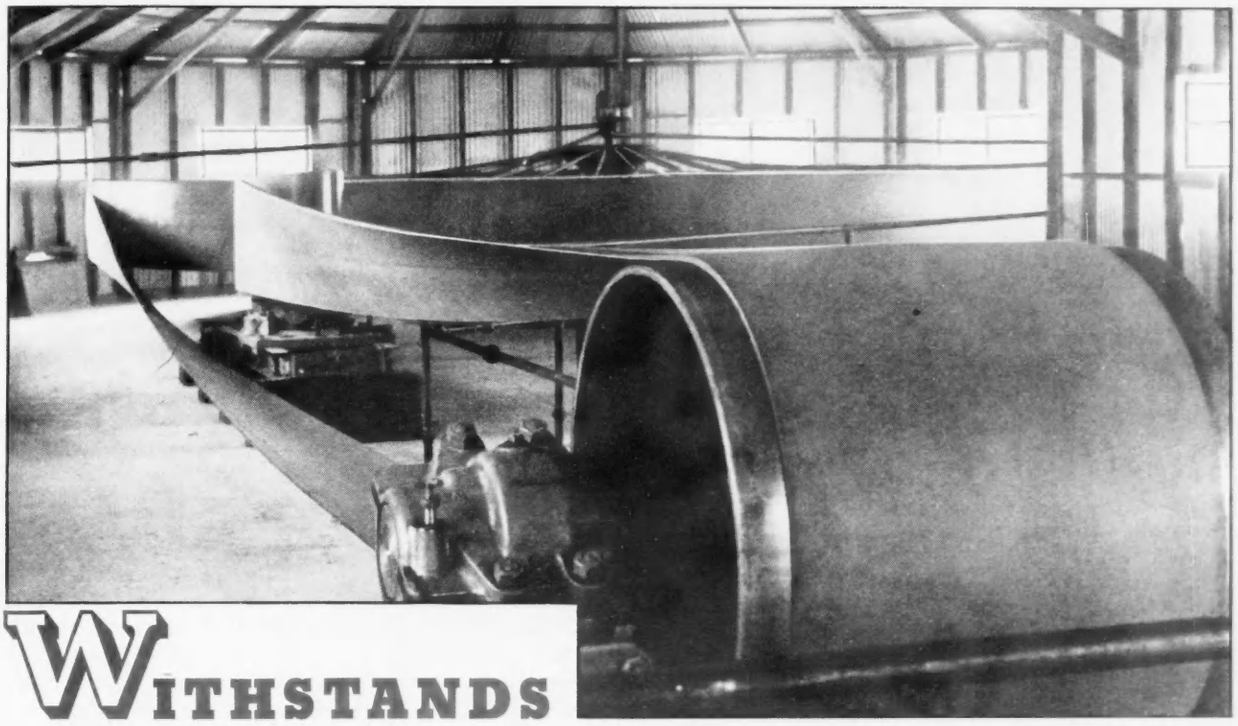
The compactly built drilling unit is mounted upon skid type sills, made by using heavy 10-inch I-beams, turned up at each end in sled runner fashion to facilitate moving from truck bed to the derrick mounting and vice versa. The length of the unit, less the mud pump, is 16 feet, and the width is 9½ feet. The overall height from the bottom of the sills to the top of the head board is 6¾ feet.

Engines Independent of Other

The engines are mounted on the main sills, and form a part of the unit. They are set at right angles to the skids and parallel to the transmission to obtain a straight drive without bevel gears. Chains are used to transmit the power from the engines to the transmission and to the mud pump. Each engine may be

This drilling rig, owned by John Nunnelee, is being operated in the Cushing gas field at a low fuel cost. It is entirely portable on one truck and a trailer.





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operated independently of the other, one driving the pump while the other is used for drilling. However, both may be connected so as to furnish power to the drawworks and still operate the pump.

In rigging up, the slush pump is placed slightly below the floor level of the derrick and directly behind the drilling unit. It has skids similar to those used on the drilling unit. The pump skids fasten to the unit skids in such a manner that alignment of the chain drive is positive.

The transmission box is made of heavy boiler plate, welded to form an oil tight and rigid container. Speed changes are procured by the driller operating the necessary lever, placed at his position on the rig floor. Two sets of forward speeds are available, divided into three speeds each; low, intermediate and high. One set of speeds is controlled through friction clutches, while another is made through the operation of positive acting jaw clutches.

The spooling capacity of this rig varies from 12,000 feet for half-inch line to 3000 feet of one-inch line. The drum upon which the line is handled is 16 inches in diameter by 40 inches in length. It is carried upon a free rolling shaft equipped with roller bearings set in self aligning housings.

This rig is being used in drilling wells in the new gas field northeast of Cushing. The wells average about 3000 feet in depth, and produce an average of 15,000,000 cubic feet of gas daily from the Prue sand.

Fuel Cost Small

The time consumed in drilling Deep Rock Oil Corporation's Sheridan 1, which was bottomed at 3090 feet, was 22 days, which included the setting of 8¼-inch flow string on top of the producing formation. A total of 838,000 cubic feet of gas were used as fuel in the prime movers, in stoves placed on the rig floor and in a small engine driven lighting generator. The total amount used was metered, but no segregation of that consumed at different points was made.

The price charged by the utility company for the fuel was 18 cents per thousand cubic feet. The total fuel bill, therefore, was $150.84, plus the Oklahoma sales tax of one percent, made a grand total of $152.35. This represented an outlay of less than $7.00 per day, or approximately five cents per foot of hole.

Since the well was drilled during December, which had very low temperatures, the fuel consumed probably was greater on Sheridan 1 than on the average for other wells.

This chain drive connects the two engines used by John Nunnelee, drilling contractor. Note the heavy steel guard. The engines may be operated independently or compounded for additional power.

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Rodessa a Big Reserve

PRESENT FIELD LIMITS INDICATE BIG RECOVERY WITH ADDITIONS VERY LIKELY

By BRAD MILLS, Associate Editor

THE new Rodessa field, located in northwest Louisiana and northeast Texas, represents one of the most important oil reserves discovered during the past five years. The performance of early completions and uniformity of formation conditions reflect the potentialities of this area and indicate an ultimate recovery far above that of any field yet found in Louisiana. It is still too early to map the trend or extent of the field on either end, but recent completions point to gradual development of acreage that will more than double the present producing area.

About 70 oil wells have been completed, and within the accepted field trends not a single dry hole has been reported. Roughly the proved area totals 4500 acres, but outpost producers actually give the field a far greater potential producing acreage. The strong response of extreme edge wells during potential tests indicated a satisfactory producing condition several locations beyond these completed wells. The field has been defined definitely, however, along one portion of the north flank.

A study of well pressures, gas/oil ratios, water encroachment, and intensity of drilling reveals a very favorable producing condition. The average pressure decline has been low, and a number of wells are now flowing with casing and tubing pressures only slightly lower than those of six weeks ago. Wells within a small area usually are affected by heavy withdrawals from a neighboring well, but the porosity of the producing zone does not permit such sudden pressure drops as have been experienced in a number of fields producing from lime formations.

May Be Series of Fields

The field at best will be a long and narrow producing strip, with the major fault line influencing the accumulation throughout the length of the area. Geologists and operators do not agree on the probable extent or trend of production, and it is now impossible to determine whether the line of production will be one unbroken field, or a series of two, three or four fields along the fault plane.

Toward the southwest and on the Texas end, there is some evidence of a break in production a few miles from the Texas state line, while on the northwest end the producing limits may pinch into the fault line at some point between the present end of the field and the Arkansas state line. One geologist holds to the theory that either the Rodessa field proper will extend into Arkansas along the fault plane, or that another field in line with the original producing area will cross the state line toward the northeast.

The structural trend northeast of Jefferson, Texas, is definite, but it is too early to place a value on this promising area. Whether Rodessa production will sweep on unbroken across this structural nose will be determined only by drilling a line of wells between present production and the southwest extremity of the apparent trend. By basing the contour lines on information derived from logs of wells drilled in and near the field, the Rodessa field proper apparently consists of a large nose off a fault extending in an almost straight line across the area. The fault does not lose its identity until it passes well into Arkansas on the northeast and into Texas on the southwest. All that is definitely known, however, is that the oil accumulation lies along the flanks of the structure, on the upthrow of the fault, with the lower side of the structure across the fault being barren. Gas has been produced near the fault line for several years.

The geology of the Rodessa field is interesting, but should be considered neither exceptional nor complex. Production is obtained in the top of the Lower Glen Rose of the Lower Cretaceous, a formation that carries gas in several northwest Louisiana fields. Production extends about 450 feet down dip from the highest point on the structure, which is the fault line. Only gas is produced on top of the structure, with the oil being found along a belt about 1½ miles wide and lying down dip to the 450-foot level. The best oil production has been developed at about 6000 feet and in the lower section of the upper third of the Lower Glen Rose.

The only safe conclusion at this stage of development is that the field already is a potentially important one and is open on both ends. A rough check shows that about 4500 acres have been proved productive. The field is about six miles long and will average more than a mile in width, although the full width has not been developed because of lenient drilling requirements and lack of offsets. By giving the field an ultimate length of 14 miles and a width of 1½ miles, the maximum producing area would be 13,440 acres. A more conservative estimate places the productive area at 9000 acres, by assuming that the Rodessa field proper will extend a few miles into Texas and will fall considerably short of the Arkansas state line on the northeast.

The total productive area along the fault line may run as high as 27,000 acres, according to geologists who have appraised the possibilities of the five-mile wide strip that extends from a point north of Jefferson, Texas, into Arkansas on the northeast end. It is claimed that this acreage may be represented by one field or by three or four fields along the fault. One maximum estimate places the total productive area

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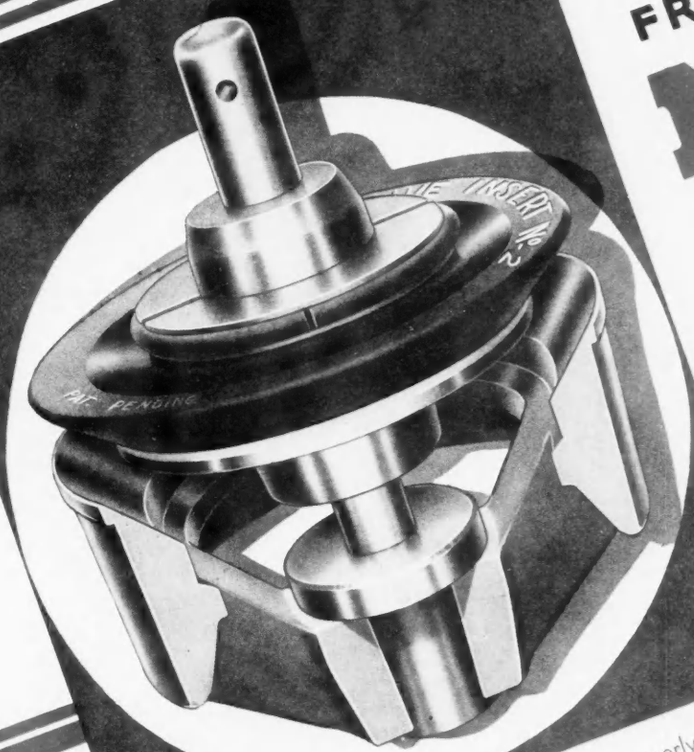

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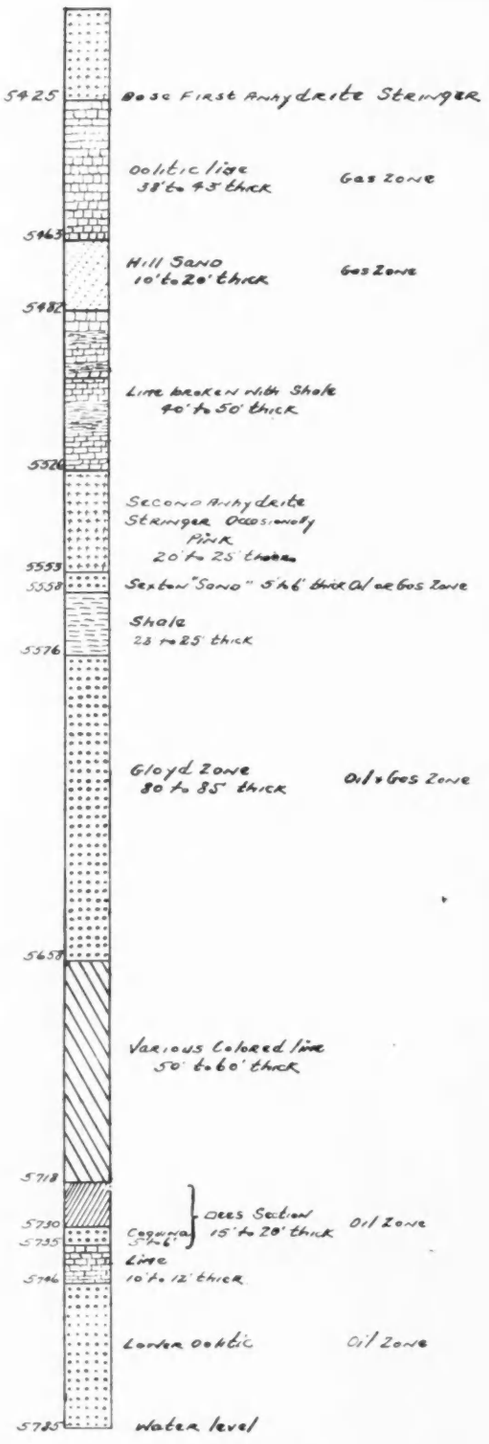

Geologic section of producing zones in the Rodessa field. Depths are taken from a well with an elevation of 269 feet and listed sub sea.

at 40,000 acres, of which about 13,000 acres will yield only gas. Such estimates appear very high at this time, and only drilling will determine the extent of production.

The Rodessa field has slowly gained recognition. The first well was regarded as a freak producer by most of the major companies, but its performance has been satisfactory from several standpoints. The rapid fire order of completions in the field has impressed many companies that formerly frowned upon entry into the area, and acreage recently changed hands at higher prices than were asked soon after the field was discovered. The uniformity of formation conditions and pressures has been conspicuous while absence of failures has indicated a blanket type of oil accumulation that compares favorably with that in fields producing from true sands. Production at Rodessa comes from the oolitic lime.

Represents a Big Reserve

The maximum thickness of the formation that produces oil at Rodessa is 53 feet, but the average saturated section is considerably thinner than the maximum. The average porosity of the productive lime section is very high and the oil indicated in place is greater than might be expected of a lime formation. The average porosity of the producing formation is above 20 percent, while examination of cores from one well showed a porosity of almost 32 percent, a condition that approached the maximum porosity that might be expected. The formation stands up well and no extended fissures, breaks or pockets have been encountered.

Estimates on the average recoverable oil per acre range from 20,000 to 30,000 barrels, with 25,000 barrels being a fair average. Actual calculations indicate a recovery above 20,000 barrels per acre, but several factors must be considered. The field apparently derives its flowing energy from a gas cap and water drive, and in calculating the percentage of oil that should be recovered, these forces play an important part. Early dissipation of the gas energy and an accompanying encroachment of water will sharply reduce the recovery of oil.

By giving the field a productive area of 10,000 acres and an ultimate recovery of 20,000 barrels per acre, the field obviously represents a reserve of 200,000,000 barrels of oil. In placing a value on the field as a reserve, it is possible to include only that acreage which appears in line for production. A number of well informed geologists estimate the recoverable oil along the fault plane, a distance of 30 miles, at 500,000,000 barrels, but such a total appears rather high at this stage of development. If the field is sensibly produced, there is every reason to believe that the ultimate recovery will be at least 20,000 barrels per acre. Estimating the number of productive acres falls strictly within the realm of speculation, but as an oil reserve the productive area along the fault line looms as one of the most important additions of the past five years.

If the district develops into a reserve of 400,000,000 or 500,000,000 barrels, it is possible that the total will include all the oil in place in two, three or four fields along the fault line. It seems safest to recognize only the acreage that is proved or definitely in line for production when making an estimate on the recov-

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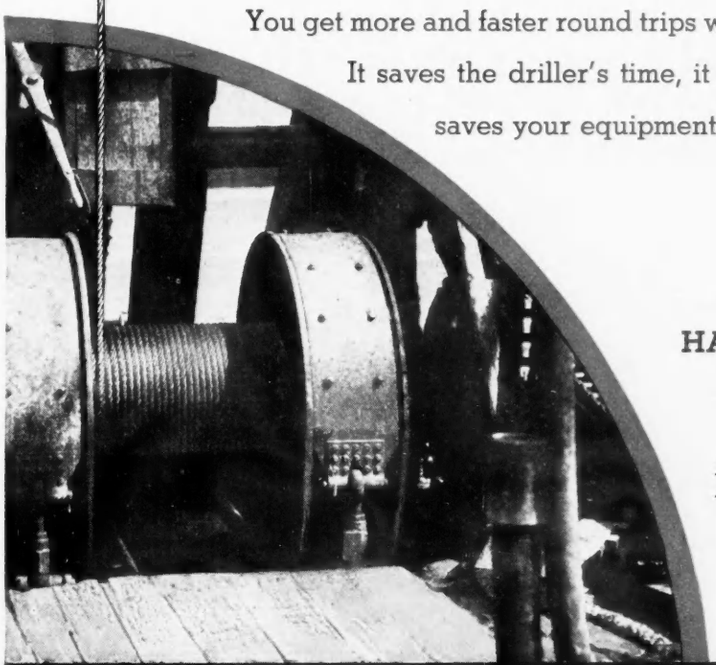

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erable oil at Rodessa. New fields on either end of the present producing area are possible, and it will require either the discovery of such fields or a great continuation of the original field to give a reserve anywhere near 500,000,000 barrels. Development to date indicates a reserve of from 175,000,000 to 225,000,000 barrels.

Production from Lower Glen Rose

All the production at Rodessa has been obtained from the upper 350 feet of the Lower Glen Rose. The middle 350 feet is composed of hard lime and shale that is barren and non-porous. This intermediate section has practically no possibilities, due to its closely cemented nature. The lower 350 feet of the 1050-foot Lower Glen Rose section consists of oolitic limes and shales of considerable porosity, and showed oil and gas in one well drilled to the base of the section. This lower third of the formation has distinct possibilities.

The importance of the base of the Lower Glen Rose must be gauged by the large production that has been obtained in the basal sands in other sections of the country. A regional sand at the top of the Red Beds also showed oil in a well drilled in the immediate area, and this formation lying just below the Lower Glen Rose has a good chance to produce in the Rodessa field. Production in the Red Beds below the Lower Glen Rose is a distinct possibility, since sands favorable to the accumulation of oil have been found in this formation.

Completion of 65 wells ordinarily defines the extent of an oil field, but at Rodessa that number of producers has failed to give the usual clue as to producing trends. Drilling requirements on edge leases have not been stringent, and the most urgent drilling has been offsets that failed to extend or define the producing limits of the field. Drilling in the immediate future will do more to outline the field. A number of recent extension tests indicated trends toward the northeast and southwest, while a gas well on the Texas side was as confusing as it was important.

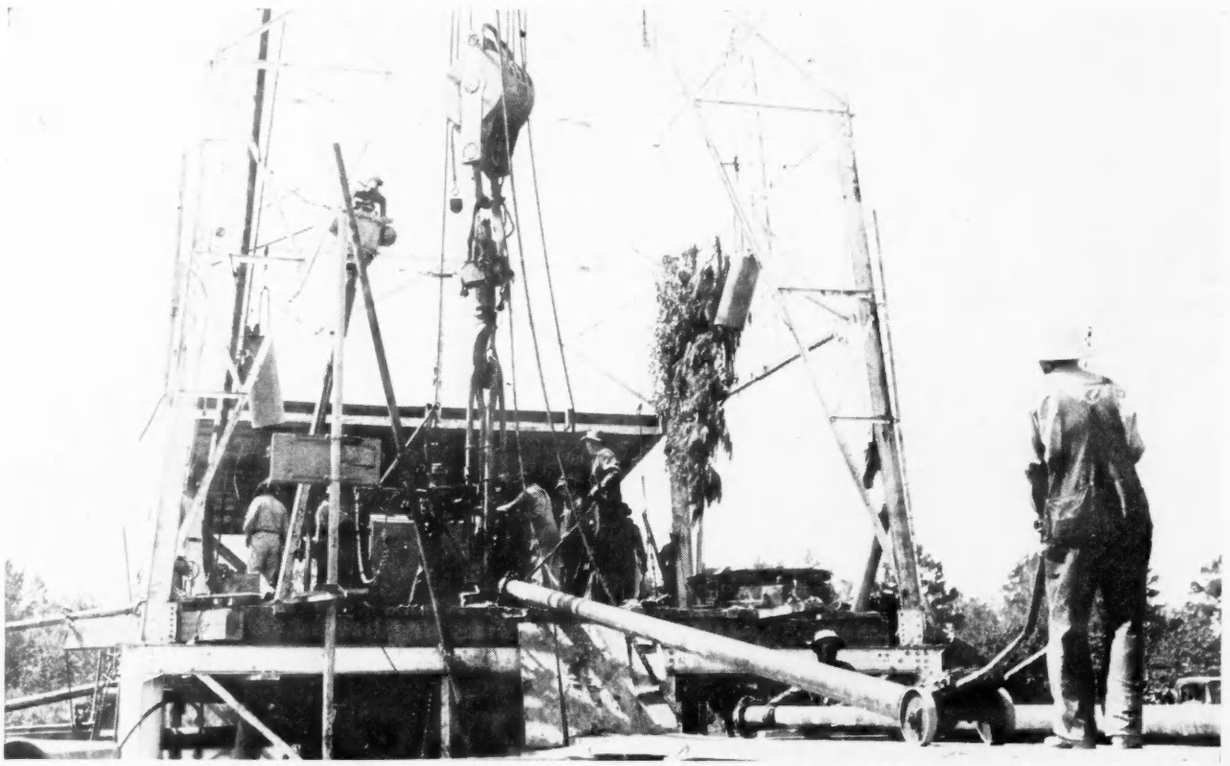
Drilling Practices Improved

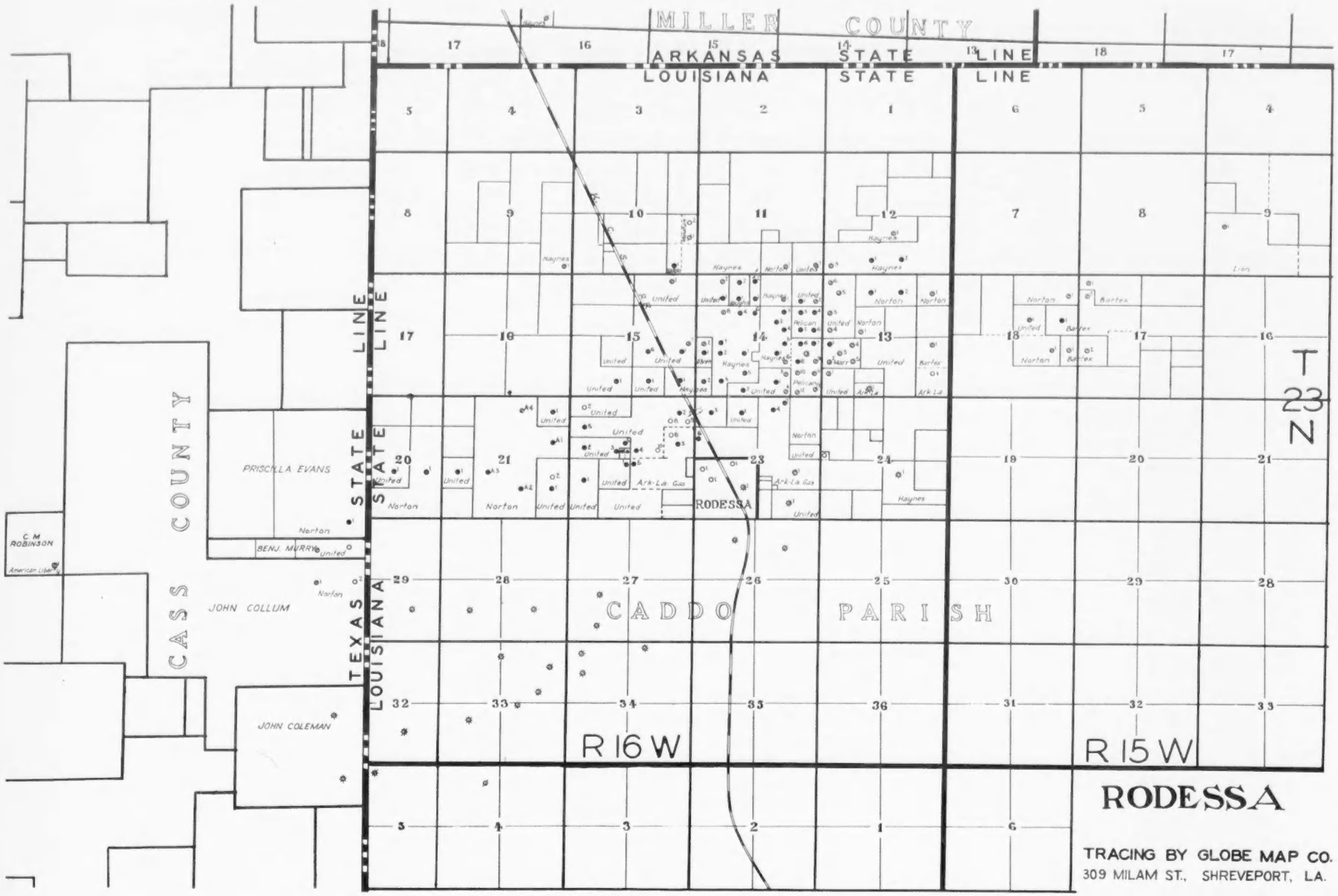
Operators have profited by their experience in drilling the first 25 producers, and now are effecting operating economies that will sharply reduce the average well cost. Drilling time has been steadily reduced, and the present average will not exceed 40 days. The average drilling time of the first few wells was above 60 days. One well recently was drilled to 4800 feet in 14 days and was due for completion in 30 days. One drilling contractor will agree to complete a well in less than 40 days, his contract being prompted by his recent success in the field.

Most of the drilling is through hard formations and rock bits are used for making from 70 to 90 percent of the hole. From 12 to 30 rock bits of various sizes are required for drilling each well. One operator uses an average of 25 rock bits per well, while one drilling contractor uses from 12 to 20 bits of this type.

The drilling program has been changed in some parts of the field to give more clearance while run-

Equipment being used at Rodessa is the heaviest ever employed in North Louisiana and compares favorably with that used in other parts of the country.





RODESSA

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ning casing. Several casing strings were stuck because of limited clearance in hard formations. The original wells started with a 19-inch hole and drilled to 400 feet, where the 13⅜-inch casing was cemented. From 400 to about 2200 feet, a 12¼-inch hole was drilled. After running 9⅝-inch casing to this depth, an 8¾-inch hole was drilled to 5950 feet. It was in this lower section of the hole that trouble developed while running casing. The early custom was to run and cement seven-inch casing in the 8¾-inch hole. Several strings were stuck and twisted off while operating with this limited clearance.

The present drilling plan of the largest operator calls for starting a 22-inch hole, which is drilled to 400 feet. At this depth 16-inch casing is cemented. A 15-inch hole is drilled to 2200 feet, where the 10¾-inch casing is cemented. From 2200 to 5950 feet, a 9⅞-inch hole is drilled, giving ample clearance for running the seven-inch casing. No pipe has been stuck since the newer drilling program was started.

Completion of the average well at Rodessa is a simple matter. Liners are run and landed on bottom without packers. A simple J-tool is used for running the liners. Five-inch perforated liners are ordinarily used. A string of 2½-inch tubing is standard with most of the operators, the landing point being about 10 feet off bottom. The producing formation stands up so well that it might be possible to produce many wells without liners.

Only two bottom-hole pressure tests have been made in the field. The indicated average for the field is 2740 pounds, but future tests may show a slightly lower figure. The flowing pressures have shown very gradual declines in the best producing wells, and in a number of instances use of slightly smaller chokes has more than restored the original tubing and casing pressures.

One well that is considered an ideal producer is flowing through an 8/64-inch choke with a casing pressure of 1000 pounds and a tubing pressure of 500 pounds. The pressures and performance indicate a high fluid level, while the gas/oil ratio is not much above that expected of the perfect producer for such a field.

Another well, and one considered as the least desirable, is flowing through a 15/64-inch choke with a casing pressure of 2100 pounds and a tubing pressure of 2000 pounds. This well has a very high gas/oil ratio, and the pressures indicate a low fluid level. Although the producer is listed as an oil well, it might more properly be called a gas well.

The subsea water level is 5785 feet, but the water table varies from the average in several parts of the field. The water level is slightly lower on the outside flank, this lag giving the producing strip a greater surface width than it would have if the water table were exactly flat. The slightly lower condition on the flank is offset by a rising tendency on the inside tracts, a natural result of an upward structural trend and the "pull" of wells high on structure.

Water trouble in early producers caused some concern, but it is believed that the origin of water was stringers of strata that were not enough to cause alarm for the future. The fact that the flow of water soon exhausted itself indicated either the presence of local water strata or the production of water that had been forced into the producing zone during completion. The percentage of water in a number of wells actually decreased until the average cut was negligible. A few wells are making water, however. It is known that several wells were completed dangerously near the water level. Water can give much trouble if the wells are produced at a high rate for long periods.

Gas waste from wells completed near the gas-oil contact has dissipated some of the flowing energy of the field, but efforts are being made to reduce this heavy flow of gas to obtain a certain amount of oil from high gas/oil producers. Some of the flowing energy undoubtedly is derived from the gas cap, and because of the porous nature of the producing formation, conservation of gas is important.

Rodessa crude oil is a better product than the first analysis indicated. It is true that the oil makes a mediocre gasoline on a straight run basis, but with a light cracking process the gasoline becomes a high-grade motor fuel. This development is significant, since it means that the oil probably will be refined largely by companies that will not throw large quantities of gasoline on the market. The cracked gasoline shows a 72-74 octane rating. The oil cracks readily under low pressures and temperatures, and contains an excellent lubricating stock. The oil at the well is about 45.5 gravity and contains little sulphur.

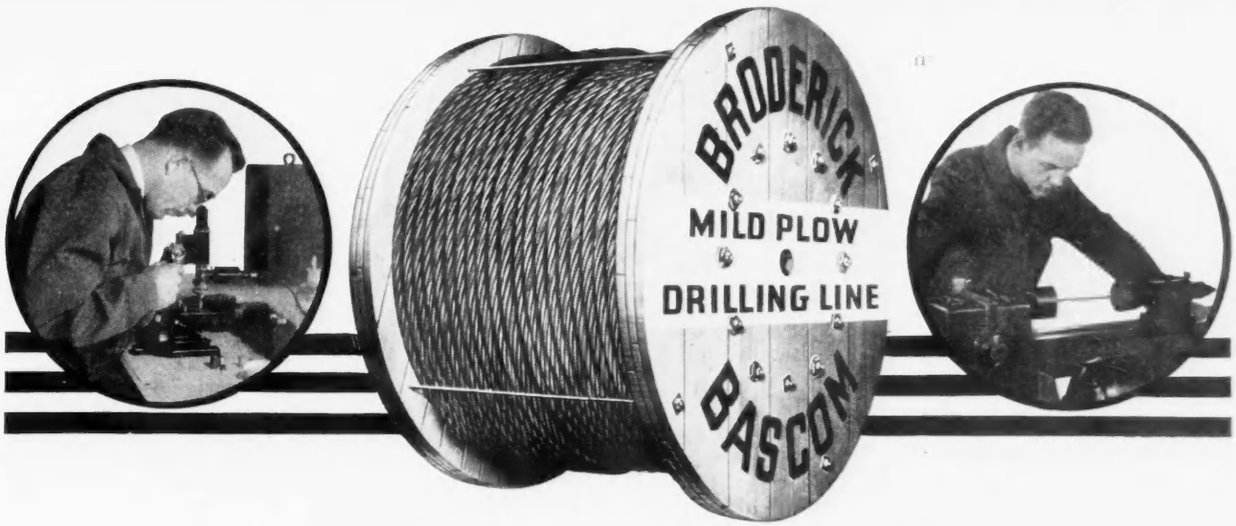
Pipe line outlets have been increased until no shortage of transportation is possible for some time. Standard Oil Company formerly operated the only oil line from the field, but recently two additional lines have been built to serve the field. Gulf Pipe Line Company has completed a line from Potters Station, Marion County, Texas, to the field, a new carrier that runs along the state line on the Texas side to a point opposite the field, thence eastward to production, a total distance of 18 miles. Magnolia Pipe Line Company has started construction work on a crude gathering system and trunk line outlet for the field, in anticipation of becoming an active carrier for Magnolia Petroleum Company, the purchaser.

Leading supply houses have opened branches at Rodessa, a sleepy village that has been rushed into a boom town of the first dimensions. The field is served by the Kansas City Southern Railway and by paved highways. The location is about midway between Shreveport and Texarkana.

More than 40 drilling rigs are running and the number will grow if extensions indicate the eventual inclusion of a large additional productive acreage. Heavy equipment, such as that used along the Gulf Coast and California, is preferred at Rodessa.

The severance tax in Louisiana is 11 cents per barrel for oil 40 gravity and above. The state will welcome a reasonable production because of the revenue it represents, but it is known that actual waste of either gas or oil will not be encouraged at Rodessa. The well allowable has been reduced gradually as production increased, and the present allowable is less than half that given the first few wells.

The field already has become a market factor, the present allowable of 32,500 barrels daily being more than the total north Louisiana production prior to discovery of the field. It is not believed that the area will seriously disturb the market, as neighboring fields have done. The oil will be taken largely by companies that will control the distribution of refined products made from it. The field has definitely arrived, however, and the industry must move over and make room for it.



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The Testing of Oil-Field Boilers

By E. F. DAWSON,
School of Mechanical Engineering,
The University of Oklahoma

OPERATING performance of equipment used in oil-well drilling is being given greater consideration at present than in the past. This is true of all equipment in the manufacturing and industrial fields, but more so in the petroleum industry because of its marked advanced development during the last few years.

The selection of oil field equipment will always be, and should be, an economic problem. When the cost of fuel is negligible the performance of the equipment is the last item given consideration in the selection of the equipment. The controlling factors are first cost, interest on the investment and depreciation. With the increase in fuel cost, performance and depreciation will, no doubt, determine to a greater extent the equipment selection.

The heart of steam drilling equipment is the steam generator or boiler. The type of boiler used in the oil field, the oil country type (or locomotive type) is quite firmly established due to its portability and its general satisfactory operation over a considerable period.

In order to increase the overall boiler plant efficiency in stationary boiler plants, numerous devices of saving heat have been tried out and with such success that many of these devices are now standard equipment. The preheating of boiler feed water, the preheating of air for combustion, the use of superheated steam, higher steam pressure and lower exhaust pressure for the prime movers and the extensive use of insulation for boilers and steam lines have done much toward increasing plant economy.

Applying these heat saving devices on oil field boiler plants depends on the answer to the question: "Is it practical and will it pay?" Many of the present day oil country boilers are equipped for feed water preheating. This is affected easily by pumping the boiler feed water through a heater, supplied with steam from the exhaust from the drilling engine or slush pumps.

Use of superheated steam is advantageous chiefly in the saving it affects in the transmission of the steam from the boiler to the steam-driven equipment, and, the increased performance of this equipment per unit of steam leaving the boiler. Steam that is condensed in the lines before reaching the steam cylinder is an inert substance from the standpoint of doing work. With superheated steam at the boiler, the steam cylinders will usually have superheated or dry steam for their operation. The excessive condensation in the steam lines may be reduced considerably when using saturated steam if these lines are insulated, however a separately fired superheater near the drilling engine and pumps has proven economical.

The rough usage to which pipe insulation is subjected on a drilling job has been the chief factor retarding its wide adoption.

The use of pressures below atmospheric pressure for the exhaust from steam driven engines and pumps calls for expensive condensing equipment. This, together with the fact that low exhaust pressures are not at all practical for the oil country type boiler plant eliminates this method of heat saving. The use of high steam pressures is desirable, however, and is much in use in present installations.

The advantages of proper installation is well known. The use of insulation for oil field boilers and steam lines affects a considerable saving in heat, as will be shown later in the article, but there still remains the economic question to be answered.

Meters, Instruments and Test Observations

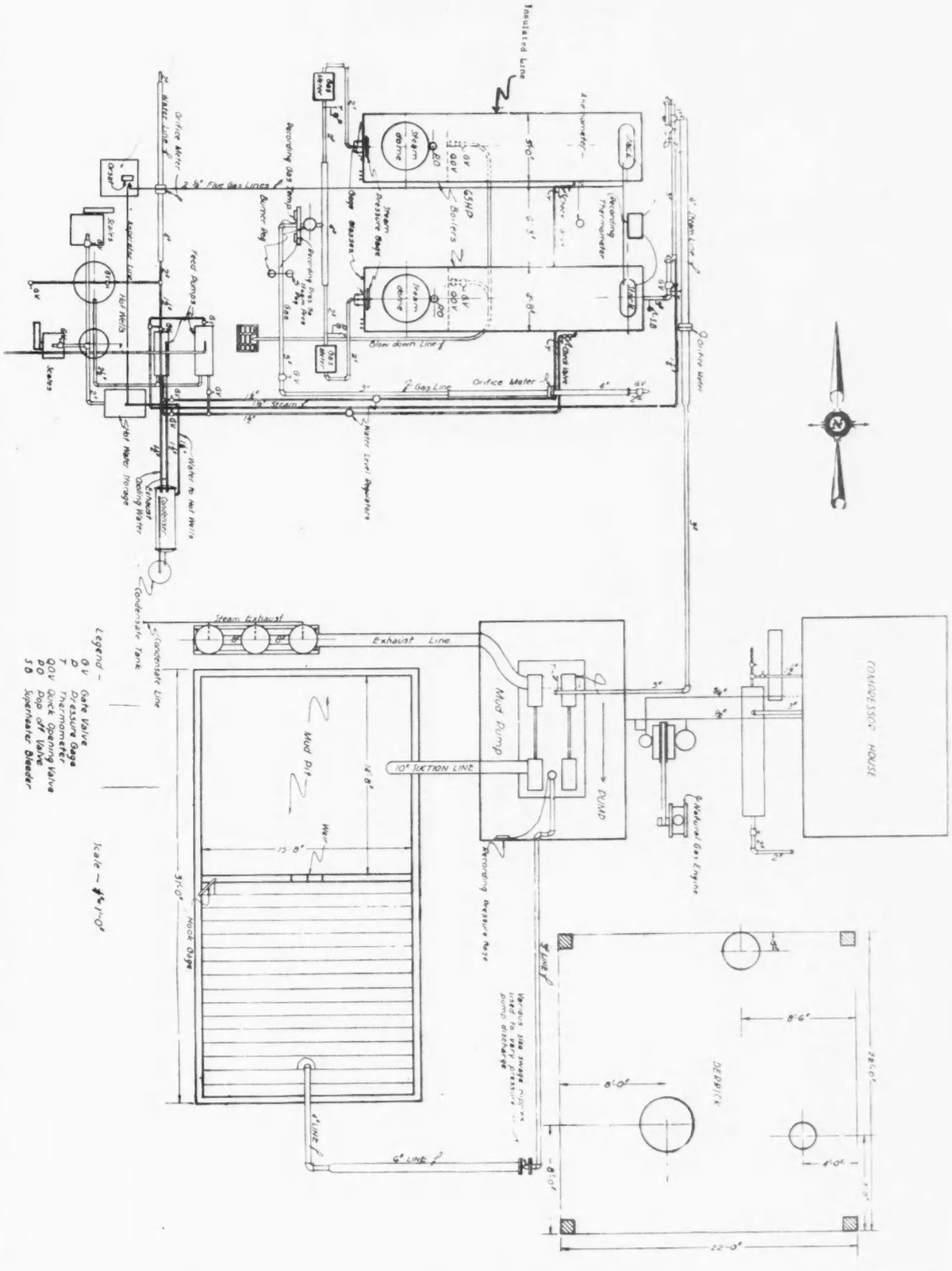
As a chain is as strong as its weakest link, so are the results from an oil field boiler plant test as accurate as the meters and instruments used in making the test. This is true providing that the test is conducted properly and the results calculated correctly.

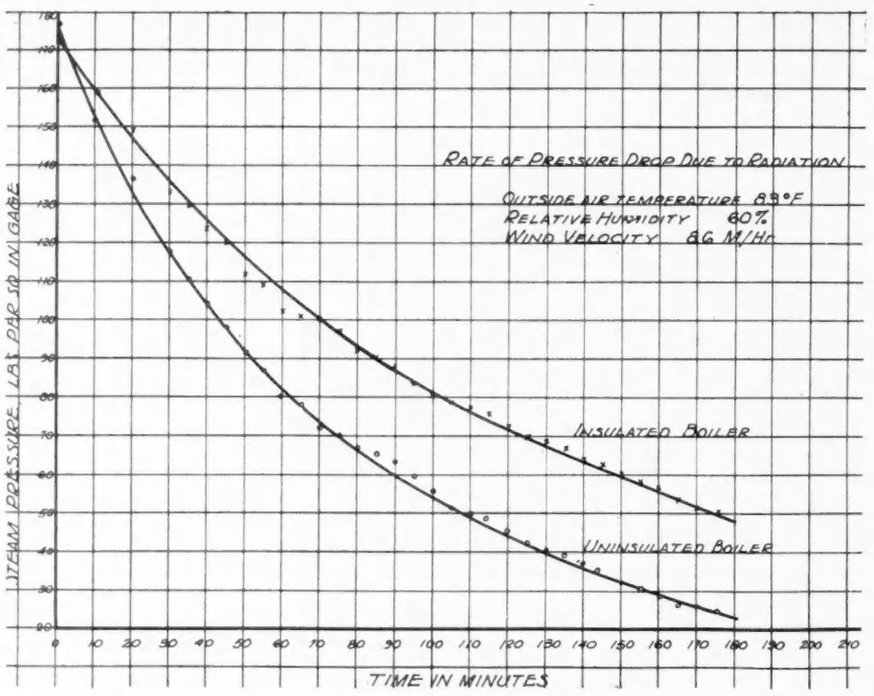
All meters and instruments should be carefully and accurately calibrated both before and after a test or series of tests. This calibration work should be done by one thoroughly versed in instrumentation.

The testing of an oil country type boiler in the field requires the determination of the following items, during the test period:

1. Fuel:
   a. Quantity.
   b. Samples for later determination of the heating value and analysis.
   c. Temperature near the meter.
   d. Pressure, if a gas, at the meter.
2. Water: (Boiler Feed)
   a. Quantity.
   b. Temperature.
3. Steam:
   A. Saturated Steam.
      a. Dome pressure.
      b. Steam quality near steam outlet.
         1. Calorimeter pressure.
         2. Calorimeter temperature.

Oil field boiler installation for study of comparative performance of insulated and non-insulated boilers at the School of Mechanical Engineering of the University of Oklahoma, Norman, Oklahoma.




RATE OF PRESSURE DROP DUE TO RADIATION
OUTSIDE AIR TEMPERATURE 83°F
RELATIVE HUMIDITY 60%
WIND VELOCITY 8.6 M/Hr.
INSULATED BOILER
UNINSULATED BOILER
STEAM PRESSURE, LBS. PER SQ. IN. GAGE
TIME IN MINUTES

B. Superheated Steam.
   a. Dome pressure.
   b. Pressure at a superheater outlet.
   c. Temperature at superheater outlet.

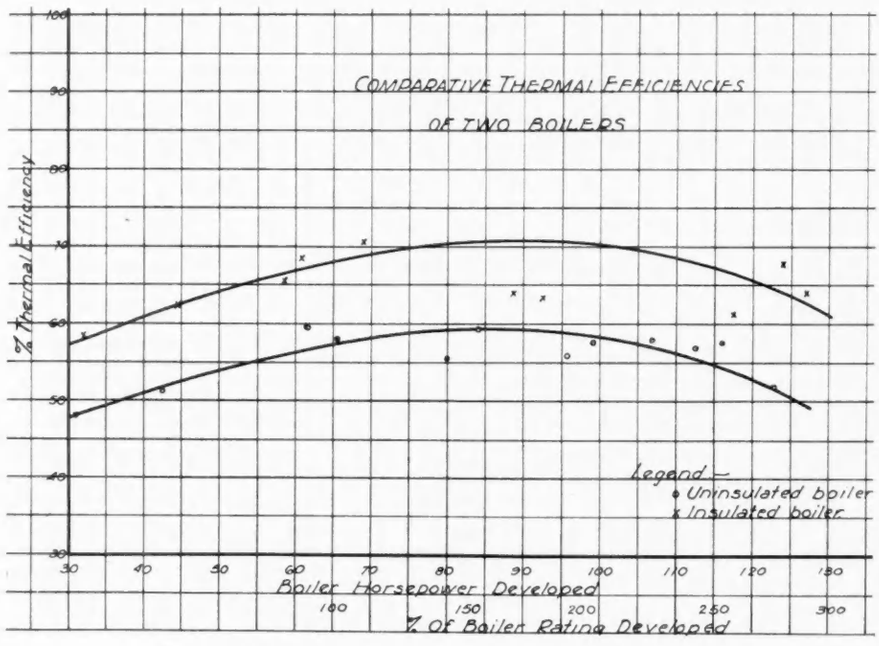
4. Flue Gas:
   a. Temperature in smoke box at base of stack.
   b. Frequent samples of flue gas for determination of the constituents with a flue gas analyzer.

5. Barometric Pressure and Air Temperature.

As natural gas is the most common fuel used for boilers of this type, this fuel will be the only one considered in the following discussion.

The determination of the quantity of gas supplied to the boiler is obtained best with large positive meters or an orifice meter. The pressure and temperature of the gas at or near the meter are of vital importance for a correct determination of the gas quantity at base conditions. If recording instruments are not available for these pressure and temperature observations, indicating instruments should be used and the observations made at frequent intervals.

The quantity of water supplied the boiler or boilers can be obtained by several methods. The water can be weighed in tanks placed on platform scales or be measured by an orifice meter. In both cases the water should be discharged to a surge tank to which the feed pumps' suction connects. There must at all times be water in this surge tank to take care of the pump demand. A water orifice meter located in the water line to the pump is not satisfactory due to the pulsations caused by reciprocating direct-acting pumps. As the steam generated equals the boiler



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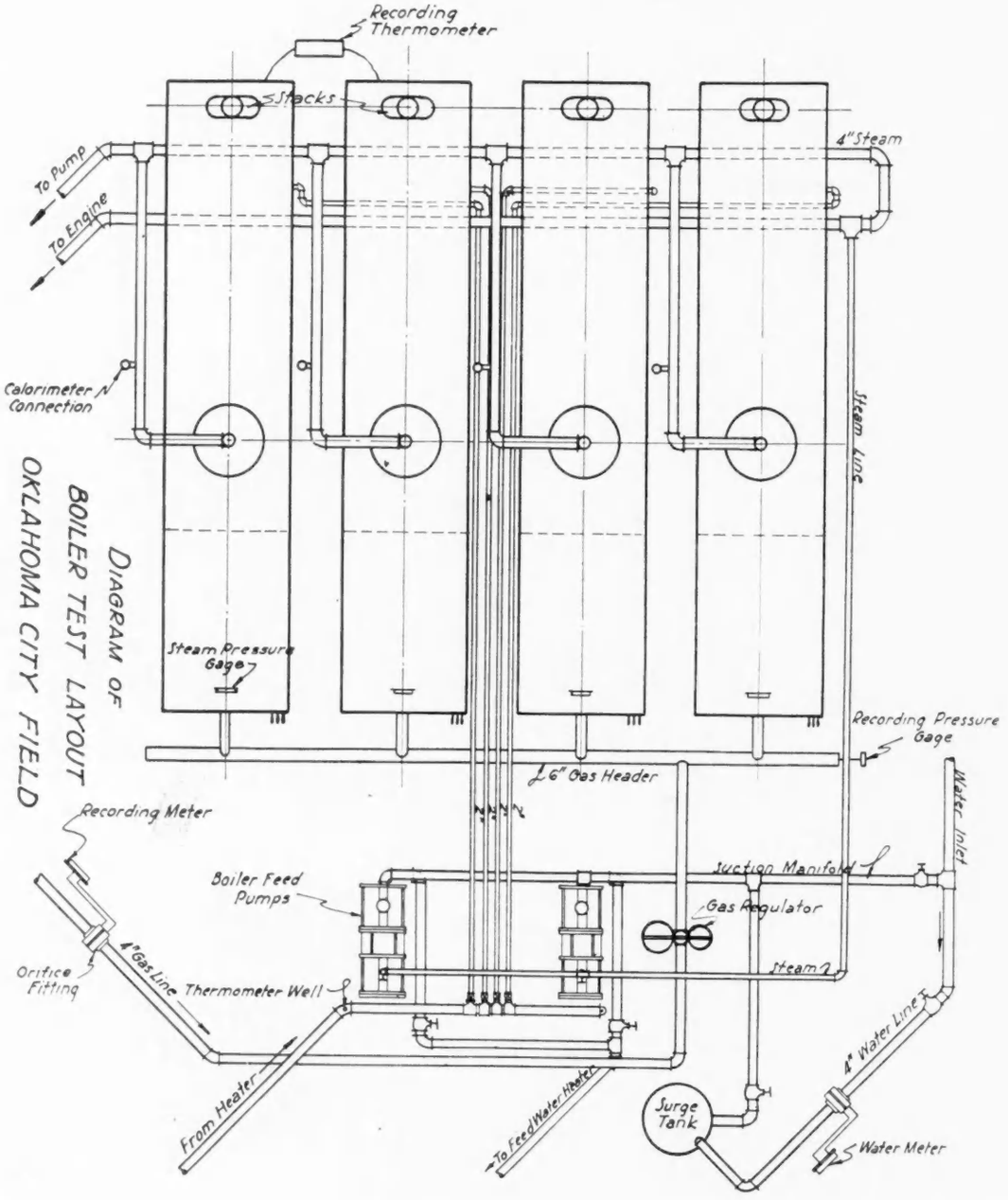
feed (neglecting leaks) it is evident that a steam flow meter might be used instead of the above mentioned methods. If a steam flow meter is used, an accurated determination of the steam pressure, temperature and quality near the meter is necessary.

Feed water temperature can be determined easily by placing a thermometer well at least three inches deep in a tee connection of the feed line to the boiler. For this observation either an indicating or recording thermometer may be used.

A throttling calorimeter for determining the moisture content of the steam is the most convenient. The calorimeter temperature and pressure are usually observed with an indicating instrument. If the boiler is equipped with superheater tubes, it is necessary to determine the steam pressure and temperature at the outlet of the superheater. These observations may be made with either indicating or recording instruments.

Flue gas temperatures vary considerably with the load variation. It is therefore desirable to use recording thermometers for this observation. The thermometer bulb should be located in a position to give a representative average temperature of the flue gas leaving the boiler.

A sample of flue gas taken from the smoke box of a boiler should be representative sample, otherwise it would be without purpose. A satisfactory sampling tube for this purpose that will give the desired sample can be made out of half-inch pipe. Holes can be drilled in the pipe throughout its length in a staggered manner. The holes near the outlet should be the smallest while those near the opposite end should be largest. One end of the pipe should be capped. The sample of the flue gas may be taken directly to the flue gas analyzer for analysis or it may be collected in a rubber bag or water sealed bottle and later analyzed. The container method is



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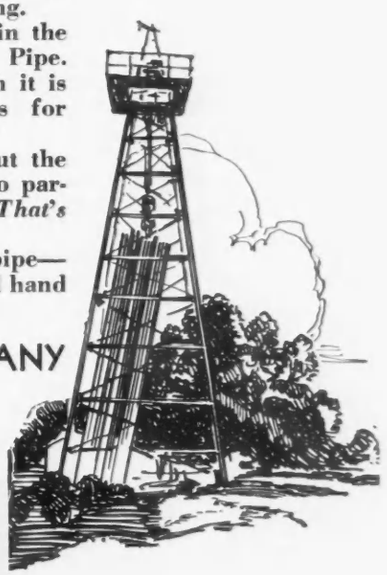

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CHESTER

STEEL CASING AND LINE PIPE

preferred as the sample is collected over a longer period of time, and, having the sample of flue gas in the container permits a check run being made from the same sample. The reagents in the analyzer should be changed as needed and the analysis made by an operator skilled in the use of this instrument.

Thermometers that are calibrated for full immersion and are used under conditions of partial immersion should have a stem correction applied. For low temperature work this correction may be negligible but when the temperature is high and the amount of the exposed mercury steam is considerable, this correction will be of such a magnitude that it should not be neglected. If a thermometer indicating the temperature of the superheated steam leaving the boiler reads, say 600° F., the average temperature of the exposed portion of the stem 100° F., and 300° of the mercury stem are exposed, the correction would be about 13° F. The correct reading would then be 613° F.

Test Procedure

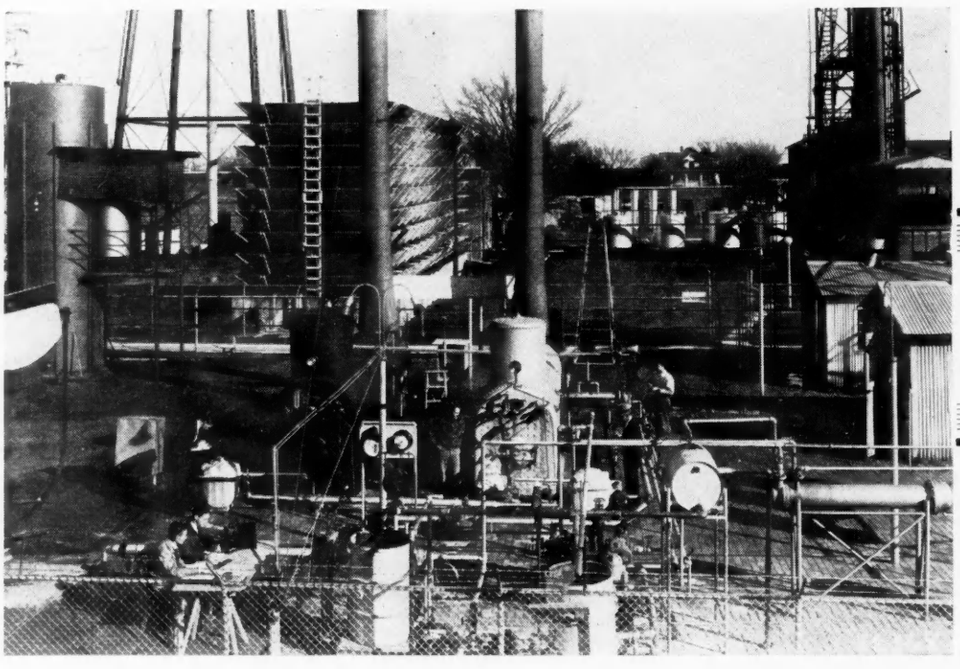
A constant load on the boiler or boilers would be ideal test conditions. This is not possible in ordinary field operation. It is desirable, however, to choose the test period so as to have conditions as nearly constant as possible. The load on the boilers is fairly constant during the period of drilling the length of one joint of drill pipe at depths below 4200 feet. A test period of four hours or more is desirable. If the time period of the drilling of one joint of drill pipe is not long enough for a test run and the time required for adding additional lengths is short, the test period can be made to extend over the drilling time of two or more lengths. A boiler test over a period of time when the load is varied considerably, gives results of the actual operating conditions but does not give the desired information as to the boiler performance under favorable conditions.

Uniform operating conditions at the beginning and end of the test cannot be overemphasized. When the load of the boiler is suddenly increased the drop in steam pressure causes the regulator to supply gas at an increased rate. The fireman will feed the boiler at a faster rate to take care of boiler water level. An increased amount of relative cold feed water pumped into the boiler causes a contraction of the water in the boiler which at first causes the gauge glass level to drop. When this water comes to normal operating temperature the water expands and the water gauge glass shows a much higher level. From this it is evident that the level of water in the boiler, as indicated by the gauge, is not a true index to the weight of water in the boiler when load conditions are varying. Therefore the test should be started only after a period of at least 20 minutes of uniform operating conditions. If it is desired to test the boiler under very constant load conditions, such can be done during the time while waiting for the cement to set. The steam can be blowed to the atmosphere at any convenient point.

At the start of the test, the water levels in the boiler and surge tank should be marked, together with the pen positions on the recording charts. All observations of quantity items must be carefully noted at the exact time of starting and ending the test.

All indicating instruments should be read at frequent intervals. If the load is fairly steady the intervals should be about 10 or 12 minutes; for a varying load, observations made about every five minutes will give an average that is very representative. Samples of the fuel gas taken near the beginning and the end of the test or series of consecutive tests should, in most cases, be quite satisfactory. The flue gas samples should be collected at times when operating conditions are fairly uniform. A flue gas sample taken at the time when a sudden change in load occurred would be far from a representative sample.

The test run should be ended in a manner similar to that of starting, that is, under uniform operating conditions. The boiler water level and the level of



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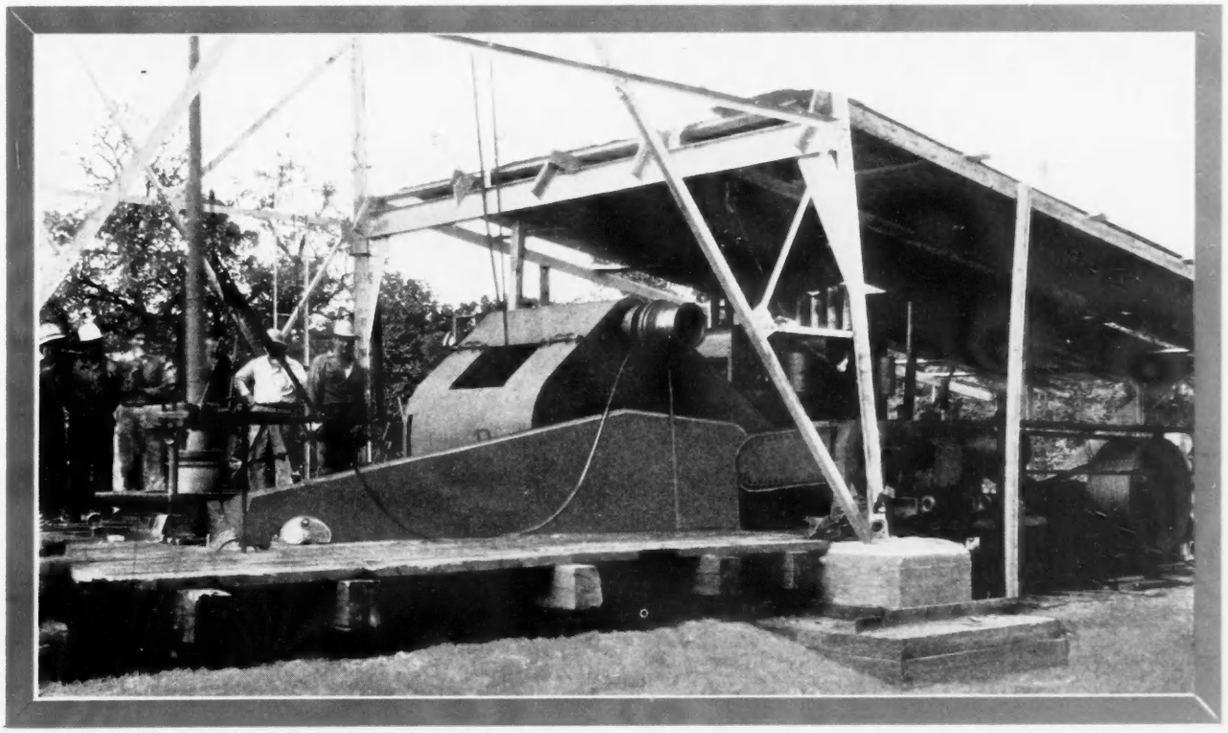

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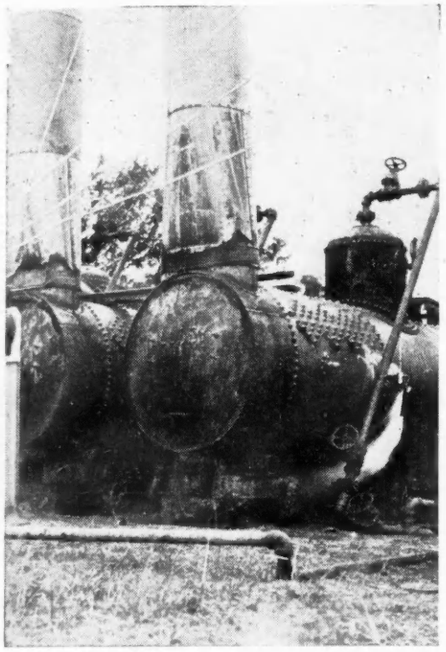

Steam Calorimeter and Recording Thermometer.

the water in the surge tank should be the same as at the beginning of the test.

Data, Results and Calculations

From the test data and the results calculated from this data, a large number of interesting items of boiler performance are available for analysis. This is especially true when a series of tests have been made at different loads. A graphical plotting of the test data and results gives a convenient means of studying and analyzing the trend of the boiler performance for varying load conditions.

Items of performance that are of interest, and desired for analysis are:

1. Efficiency of the boiler and furnace.
2. Evaporation per cu. ft. of gas.
3. Evaporation per square foot of heating surface.
4. Evaporation per cubic foot of combustion space.
5. B.t.u. per hour absorbed by the water and steam per square foot of heating surface.
6. Boiler horsepower developed.
7. Percentage of rated horsepower developed.
8. Heat balance items:
   a. Loss due to dry stack gases.
   b. Loss due to water formed from combustion of hydrogen in the fuel.
   c. Loss due to incomplete combustion.
   d. Loss due to unburned hydrocarbons, radiation and unaccounted for.

Formulae:

Item (1)

$$\text{Efficiency} = \frac{\text{B.t.u. absorbed by water and steam per hour}}{\text{B.t.u. supplied per hour by the fuel gas}} = \frac{W\,(h - h_f)}{(G \times H_g)}$$

where, W = weight of steam generated per hour, pounds.
h = enthalpy (total heat) of steam at boiler outlet, B.t.u. per pound.
h_f = heat of the liquid of the boiler feed water, B.t.u. per pound.
G = Cubic feet of fuel gas supplied per hour under assumed base conditions.
H_g = heating value of the fuel gas, B.t.u. per cubic foot, under the same base conditions as above.

Item (2)

$$\text{Evaporation per cubic foot gas} = \frac{\text{Pounds steam generated per hour}}{\text{Cubic feet gas supplied per hour}}$$

Items (3), (4)

These items are determined as for Item (2) with the denominator of the expression being respectively square feet of heating surface and cubic feet of combustion space.

Item (5)

Heat absorbed, B.t.u. per hour per square foot of heating surface

$$= \frac{W\,(h - h_f)}{\text{Sq. ft. of heating surface}}$$

Item (6)

$$\text{Blr. H. P. developed} = \frac{W\,(h - h_f)}{970.2 \times 34.5} = \frac{W\,(h - h_f)}{33{,}472}$$

Item (7)

$$\text{Percent Rating} = \frac{\text{Item (6)} \times 100}{\text{H. P. Rating of boiler}}$$

Item (8): Heat Balance

The heat balance items for a gas fired boiler can most readily be determined by the use of the molal method of calculation. A brief explanation of this method follows:

A "Mol", or rather a "pound Mol" of a substance is the weight in pounds of that substance corresponding to its molecular weight. Thus, one mol of carbon is 12 pounds, oxygen 32 pounds, hydrogen two pounds, nitrogen 28 pounds, methane (CH_4) 16 pounds, ethane (C_2H_6) 30 pounds, etc.

When the substance is a gas, one mol of this gas at a specific pressure and temperature occupies a definite volume. This volume in cubic feet can be easily determined from the following expression:

$$V_m = 10.72 \frac{T}{P}$$

where: T = Temperature, degree Fahrenheit absolute.
P = Pressure, pound per sq. in. abs.
10.72 = Constant for all true gases.
V_m = Mol volume, cu. ft.

When the base conditions chosen for the heat balance calculations are 14.65 pounds per square inch absolute and 60°F. (520°F. absolute) the mol volume is 381 cubic feet.

One mol of fuel gas or 381 cubic feet may be taken as the heat balance calculation unit. The B.t.u. heating value of a mol of gas will then be: 381 × G, G, being the heating value per cubic foot.

a. Heat loss due to the stack gases = HL_1

$HL_1 = w_1\, Mc_p\, (t_c - t_a)$

where, w_1 = mols of dry stack gases per mol of fuel.
Mc_p = molecular specific heat of flue gas (approximately 7.10).
t_c = temperature flue gas, degree Fahrenheit.
t_a = temperature of air, degree Fahrenheit.

"w_1" is determined from what is known as a carbon balance, that is, the carbon in the flue gas comes from the carbon in the fuel.

$$w_1 = \frac{\text{carbon in fuel}}{\text{carbon in flue gas}} = \frac{CH_4 + 2C_2H_6 + CO_2 + \text{etc.}}{CO_2 + CO}$$

Constituents of fuel gas and flue gas are given in volume percents.

$$\text{Loss in percent} = \frac{HL_1 \times 100}{381 \times G}$$

b. Heat loss due to water formed from the combustion of hydrogen in the fuel = HL_2

$HL_2 = w_2\,(1090.6 - t_a + 0.46\, t_c)$

where: w_2 = pounds of water vapor in the stack gases formed from the combustion of the hydrogen, per mol of fuel.
t_a = temperature of air, degrees Fahrenheit.
t_c = temperature of flue gas, degree Fahrenheit.

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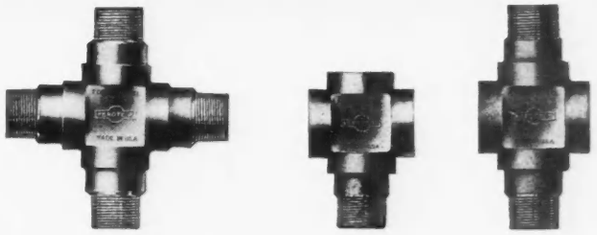

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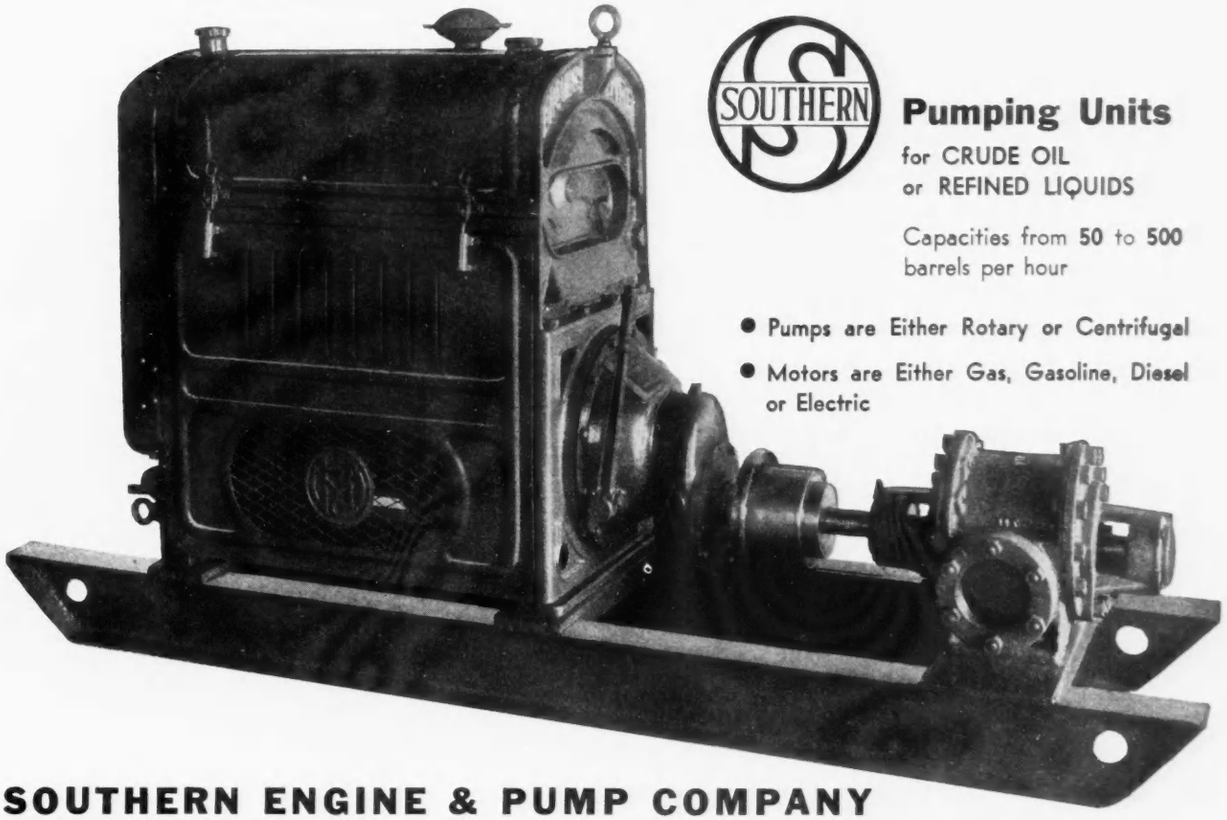

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$w_2 = 18$ (mols of water vapor formed per mol of fuel).

$w_2 = 18\ (2 \times CH_4) + (3 \times C_2H_6) + \text{etc.})$

$$\text{Loss in percent} = \frac{HL_2 \times 100}{381 \times G}$$

c. Heat loss due to incomplete combustion = HL_3

Carbon monoxide in the flue gas is a loss that must be taken into consideration in the heat balance. In most present day installations this loss is negligible if proper air is supplied for combustion and proper mixing of the fuel and air takes place in the combustion space.

The heating value of carbon monoxide is 4354 B.t.u. per pound or 121,900 B.t.u. per mol ($4354 \times 28 = 121,900$)

$HL_3 = W_3 \times 121,900.$

where: w_3 = mols of CO in flue gas per mol of fuel.

$$w_3 = \frac{\text{CO in flue gas}}{100} \times w_1$$

CO = percent by volume of carbon monoxide in dry flue gas (see part "a" for "w_1")

EXAMPLE

This example will illustrate the calculations of the boiler efficiency and heat balance items.

Data:

Barometer, inches of mercury	28.6
Steam pressure, lb. per sq. in. gauge	250
Steam pressure, lb. per sq. in absolute	264
Steam quality, percent	98
Steam flow, pounds per hour per boiler	6200
Fuel: Natural Gas.	
Fuel gas per hour per boiler, cu. ft. at 14.65 lb./sq. in. abs. and 60°F	11,000
Fuel gas heating value, B.t.u. per cu. ft at 14.65 lb./sq. in. abs. and 60°F	1120
Fuel analysis: percent by volume.	
Methane (CH_4)	78
Ethane (C_2H_6)	19
Nitrogen (N_2)	3
Fuel gas analysis, percent by volume.	
Carbon Dioxide (CO_2)	6.2
Oxygen (O_2)	10.5
Carbon Monoxide (CO)	0.3
Nitrogen (N_2) (by difference)	83.0
Fuel gas temperature, degree Fahrenheit	790
Feed water temperature, degree Fahrenheit	112
Air temperature, degree Fahrenheit	86

Results:

Enthalpy (total heat) per pound of steam, B.t.u.	1185
Enthalpy per pound of feed water, B.t.u. (112 — 32)	80
Heat added by the boiler per pound of steam, B.t.u.	1105
B.t.u. absorbed per hour per boiler; (6200 × 1105)	6,850,000
B.t.u. in fuel gas supplied per hour per boiler; (11,000 × 1120)	12,320,000

Boiler efficiency = $6,850,000 \times 100 \div 12,320,000 = 55.6\%$

Mol volume at 14.65 and 60° F.

$$= \frac{10.72 \times 520}{14.65} = 381 \text{ cu. ft.}$$

Heating value per mol = $381 \times 1120 = 426,700$ B.t.u. or 100%.

(a) Heat loss due to dry stack gases, B.t.u. per mol of fuel = HL_1.

$$w_1 = \frac{78 + 2 \times 19}{6.2 + 0.3} = 17.8 \text{ mols of dry flue gas per mol of fuel.}$$

$HL_1 = 17.8 \times 7.10 \times (790 - 86) = 88,970$ B.t.u. or 20.9%.

(b) Heat loss due to water formed from the combustion of the hydrogen in the fuel = HL_2.

$w_2 = 18\ (2 \times 0.78) + (3 \times 0.19) = 38.3$ pounds water vapor in flue gas per mol of fuel.

$HL_2 = 38.3\ (1090.6 - 86 + 0.46 \times 790) = 52,380$ B.t.u. or 12.3%.

(c) Heat loss due to incomplete combustion = HL_3.

$w_3 = (0.3 \div 100) \times 17.8 = 0.0534$ mols of CO per mol of fuel.

$HL_3 = 0.0534 \times 121,900 = 6510$ B.t.u. or 1.5%.

Summary of Heat Balance

Item		B.t.u. per mol of fuel	Percent
	Heat in fuel	426,700	100.0
(1)	Heat absorbed by the water and steam	237,200	55.6
8 a.	Heat loss due to dry stack gases	88,970	20.9
	b. Heat loss due to water formed from the combustion of the hydrogen	52,380	12.3
	c. Heat loss due to incomplete combustion	6,510	1.5
	d. Heat loss due to unburned hydrocarbons, radiation and unaccounted for (obtained by difference)	41,640	9.7

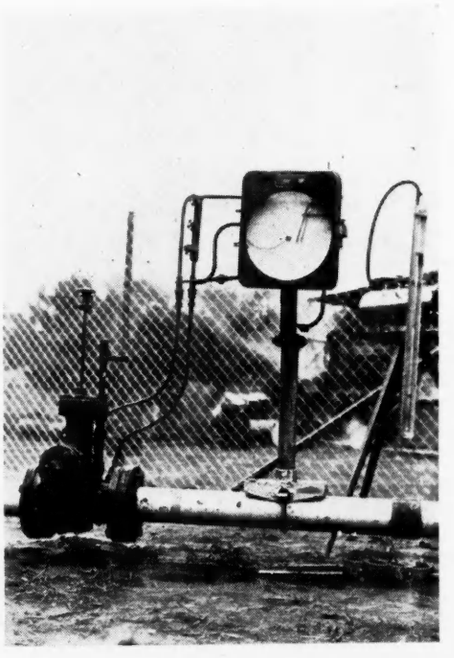
A heat balance summary is valuable in that it shows at a glance the heat disposition. A study of the items of the heat balance may lead to operation changes whereby the losses can be reduced and the boiler efficiency increased.

The dry stack gas loss can be reduced by changing the operation so as to lower the temperature and amount of the flue gas. It would not be practical in oil country boiler operation to remove heat from the flue gas by using an air preheater or an economizer. If it were, the reduction in the stack draft due to this temperature reduction might prohibit such equipment being used. A reduction of the amount of air supplied for combustion will reduce the amount of stack gases. A deficiency of air will cause the boiler to gasp for air or carbon monoxide may be formed and be present in the flue gas.

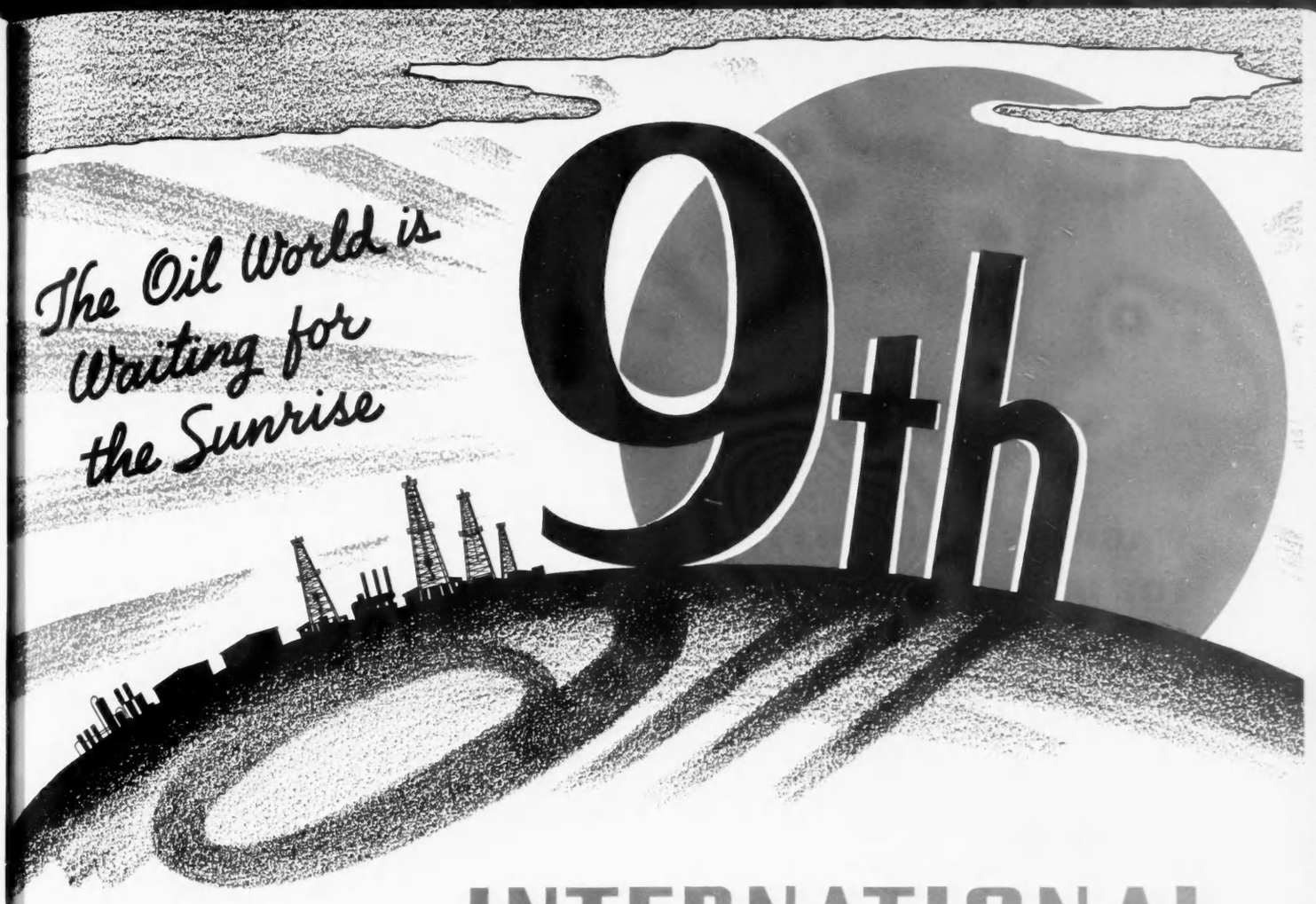
The heat loss due to the water vapor formed from the combustion of the hydrogen in the fuel cannot appreciably be reduced. Lowering the flue gas temperature will give a slight reduction. This loss may be considered an inherent loss.

The loss due to the presence of carbon monoxide in the flue gas can be entirely eliminated by proper firing in boilers having properly designed combustion chambers. Insulating the boiler will materially reduce the radiation loss.

When changes are contemplated in an oil country boiler installation, an economic analysis should be made as well as the thermodynamic analysis.



Gas Meter and Gravity Balance.



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The World's Fair of the Oil Industry

THE accompanying article adds to previous discussions published in THE OIL WEEKLY relative to the proposal that the Gulf Coast be given an absolute gravity survey from the Rio Grande to the Atlantic Ocean. There seems to be no question but that the petroleum industry, as well as other businesses, would benefit greatly from such work, and it is to be hoped the project will become an actuality in the near future.

WARPING OF FORMATIONS ALONG THE GULF COAST MAKES GRAVITY

Survey Desirable

By CYRIL K. MORESI, State Geologist,
Department of Conservation, State of Louisiana

THE proposal for an absolute gravity survey and for the erection of monuments or bench marks, essential to reliable map making, at sufficient and practical intervals of all the states along the Gulf of Mexico by the United States Coast and Geodetic Survey is highly desirable, (see THE OIL WEEKLY, November 11, 1935, page 38). Louisiana is particularly interested as the Louisiana Geological Survey is actively engaged in determining the fundamental conditions making possible the vast petroleum accumulations along the Louisiana coast.

Work in Louisiana

The United States Geological Survey, with the financial cooperation of the State Board of Engineers and the Louisiana Department of Conservation, is remapping at the present time some 34 quadrangles in southeast Louisiana. These quadrangles were surveyed originally during 1890, 1891 and 1892, but they cannot be used today to check with the newer quadrangles, as they were mapped insufficiently. It is true that the physiography of the Mississippi delta and the coastal marshes are changing at a rapid rate, and it will be necessary to remap this area from time to time. Therefore, a network of monuments or bench marks with elevations above sea level, at the intersection of longitude and latitude lines at one degree intervals, will be of great value in remapping this section of Louisiana. If these surveyors had had the facilities of accurately established bench marks at regular intervals such as is proposed, these maps would not show the topography of the land as it is today, but would serve to record the physiographic changes which have taken place during the past 30 years. Recent investigations in Plaquemines and St. Bernard Parishes[1] and Cameron and Vermilion Parishes[2] show that "the growth of the Mississippi delta is not only outward but downward as well, and that the warping under the deposit of sediment affects not only the active delta itself but carries down a large marginal area as well."

Permit Movement Check

Information regarding the rate at which the marsh lands and marginal lands along the Louisiana coast is warping would be invaluable to agriculture, to the shrimp, oyster, and fish industries, and to the mineral and other industries located along the coast. A complete network of bench marks established by the United States Coast and Geodetic Survey would be a means by which this movement could be finally recorded. It is also desirable to determine whether or not there is any movement of the salt domes of the Gulf Coast region.

Dr. H. V. Howe, Director of the Research Division of the Louisiana Geological Survey, in a recent paper[3] states "that the Gulf Coast region of the United States is the landward side of the most active geosyncline in North America. McGee, 43 years ago, pointed out 'That the Gulf of Mexico was one of the most fortunately situated depositional tracts of the globe for the measurement of isostatic subsidence . . .'"

There is no other section of the United States wherein an absolute gravity survey would better assist such a large group of scientists who are actively engaged in exploring the underground structures and who are endeavoring to unravel its geological history.

[1] A geological survey of these two parishes is being conducted by Dr. R. J. Russell, Louisiana State University, for the Research Division, Louisiana Geological Survey.
[2] H. V. Howe, R. J. Russell, and J. H. McGuirt, "Physiography of Cameron and Vermilion Parishes," Geological Bulletin No. 6, *Louisiana Dept. Consv.*, 1935.
[3] Geological Survey Notes, "Louisiana Conservation Review" *Louisiana Dept. Consv.*, January, 1936, p. 26.

These five 7-inch Cameron Pressure Operated Gate valves, with companion flange nipples, are part of a shipment destined for a major company operating in South America. They will be flanged to the flowline outlets of an equal number of Cameron Type "SDA" Pressure Operated Blowout Preventers, the combination of which units provides maximum blowout protection under the highest well pressures.

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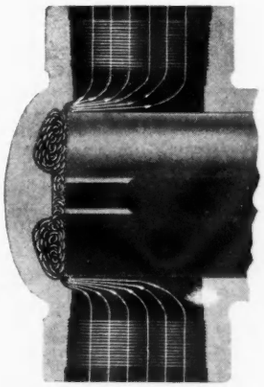

Illustration above indicates how the ram-gate of a Cameron Valve enters a cylindrical shelf after it has traveled across the main bore of the valve, and before it makes a final seating. At top and bottom of the cylindrical shelf a small port is located. These two ports serve as chokes, greatly restricting the volume as well as velocity of gas or fluid passing between the seat and the ram-gate packing element. Seat is kept thoroughly clean, and at the same time cutting action is virtually eliminated.

You may have the world's best blowout preventer on your well—a Cameron Type "SDA" Full Pressure Operated—*but it can't help you at your flowline!*

As you know, when a well starts unloading, its full force is diverted through the flowline as soon as the blowout preventer is closed. You can count on your "SDA" Preventer to hold perfectly—but your well cannot be properly controlled unless equipped with a dependable flowline valve.

On the flowline, a Cameron Pressure Operated Gate Valve gives you the same swift, positive and certain closure as your "SDA" Preventer does on the drill pipe. Your driller operates two four-way valves, instead of one, and your well is entirely closed in.

That's real control—the kind worth a million dollars when a well starts slopping over!

Full details of this remarkable new valve will gladly be furnished on request. Its ingenious self-feeding packing element, and its extraordinary resistance to sand-cutting while it is being closed against gas or fluid pressure, are worth any man's knowing about.

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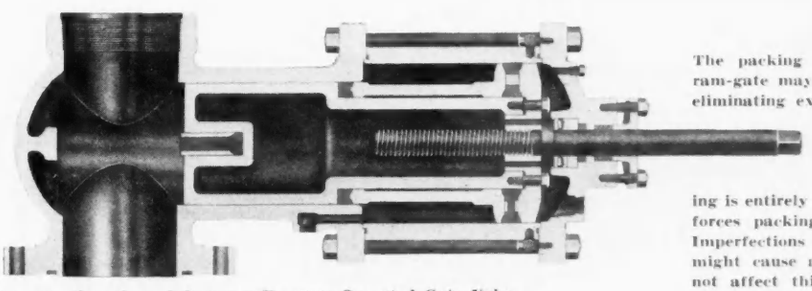


Cross-section view of Cameron Pressure Operated Gate Valve shows clearly its simple but rugged construction. All Cameron Gate Valves can be closed manually should pressure source fail.

The packing element of the Cameron Valve ram-gate may be replaced easily in the field—eliminating expensive shop reconditioning jobs. Packing element is moulded in one piece of special resilient material. When ram-gate contacts valve seat, resilient packing is entirely confined by steel. Closing pressure forces packing material to flow to the seat. Imperfections of the seating surface, which might cause a conventional valve to leak, do not affect this valve. Note that the seat is self-cleaning, assuring a positive, leak-proof closure under all conditions.

[*Continued from page 15*]

ly operates a refinery with Mitsubishi Company. Turner also is president of the Industrial Athletic Association of San Francisco, the largest organization of its kind west of Chicago and is a member of the Athletic Committee for San Francisco 1938-9 World's Fair.

R. D. RICHARDSON, who has been supervisor of accounts of the manufacturing division of Associated Oil Company, has been appointed assistant comptroller for the company, with headquarters at San Francisco. He is succeeded by H. E. Brigden.

P. G. BOARDMAN has been appointed as superintendent of the telephone, telegraph and teletype department of Associated Oil Company, in charge of all operations, including construction and maintenance. He has been chief clerk of the department for several years.

R. B. COCHRAN, independent operator of Tampico, Mexico, is in the United States on a brief business trip.

DR. L. W. BLAU, of Humble Oil & Refining Company, Houston, was the speaker at the regular weekly meeting of the Houston Geological Society, February 6, and dealt in his discussion with geophysical prospecting.

AMOS R. COLEMAN, formerly auditor of Cortez Oil Company and a resident of Mexico for many years, has been appointed manager of the recently organized tourist department of Mexican Sinclair Petroleum Corporation. This department has been organized to promote automobile traffic over the new Mexican national highway from Laredo to Mexico City, and to render all assistance possible to American tourists visiting Mexico. Fourteen service stations and camps have been established, and more are contemplated.

PHILLIP H. MESSENGER, manager of Continental Oil Company's interests in Mexico, with headquarters at Monterrey, was in Mexico City recently on business.

CHANDLER MARKELL, formerly in the factory of Youngstown Sheet and Tube Company, has been transferred to Tulsa as field engineer.

V. P. McANALLY, for the past six years manager of the McPherson store of Bovaird Supply Company, has been transferred by that organization to be manager of the Russell, Kansas, store. He is succeeded by Jack Edwards who was manager of the Russell store. Edwards formerly was with Oil Well Supply Company and has many acquaintances in the McPherson district which he formerly covered.

ROBERT M. WHITESIDE, geologist in the Tulsa division of Shell Petroleum Corporation, discussed, "Strategraphic Position of the pre-Marmaton," at a meeting of the Tulsa Geological Society on Monday evening, February 3.

R. VAN MILLS, Continental Oil Company, has been at the Ponca City headquarters of the company for the past week. Mills has been spending much time in the company's Gulf Coast division, which has headquarters at Houston.

T. RIEBER, chairman of the board, and W. S. S. Rodgers, president, and other officials of The Texas Company, New York, were in Houston last week on an inspection tour of the company's producing and refining properties in the Gulf Coast. The officials were met in New Orleans by Vice President T. J. Donoghue, general manager of the Houston office, who accompanied them on a tour of the Port Arthur plant enroute to Houston. The party went from the Gulf Coast to East and North Texas, then to Oklahoma. In addition to Messrs. Rieber and Rodgers, the party included the following: R. Ogarrio, vice president in charge of production; Harry T. Klein, general counsel; W. G. Dunningham, W. S. Gray, R. Shield, Henry U. Harris and Barklie Henry, directors, all of New York; W. H. Mitchell, director, Chicago; L. H. Norris, director, St. Charles, Illinois; and E. W. Quinn and C. A. Thomas, secretaries, from New York.

MYRON M. KINLEY of Houston, well-known explosive expert and famous for his fighting of oil well fires, was injured in an explosion that occurred last week on a rig in Matagorda County, Texas. He suffered a broken arm and leg along with severe burns and bruises. Kinley is recovering in a Bay City hospital, where he is expected to be confined for at least a month.

J. G. DYER, drilling superintendent east of the Rocky Mountains for Continental Oil Company, has been at Seadrift and Citrus Grove, Texas, where the company is drilling some important heaving shale tests.

FRED (PETE) WALLACE, Link-Belt Company, has returned to his headquarters in Houston after a tour of the active Oklahoma oil districts.

M. O. RIFE, general superintendent of production in the Fort Worth division of Gulf Oil Corporation, has recuperated from a recent illness and has resumed his duties.

GUY W. MOSLEY, Fort Worth operator, was confined in a Fort Worth hospital with pneumonia the past week.

HAL I. GREER, 45-year old Houston oil operator, ended his life February 4 with carbon monoxide gas from the exhaust of his car. Greer had been prominent in the Coastal district oil circles for a number of years.

WELLS DECLARED GAS

Austin.—Wells on the W. L. Pearson properties in the Refugio field, which have been furnishing gas for Clymore stripping plant there, must be operated as gas wells.

This ruling by the Texas Railroad Commission resulted from a decision handed down by Federal Court recently under which the court found that the wells were gas rather than oil wells despite the fact that they made a small amount of fluid.

The effect of the order will be to require that any gas produced from the wells must be utilized for light and fuel purposes, or at least must not be blown in the air as has been the practice in the past.

A. I. M. E. PROGRAM

Tulsa.—Power for rotary drilling will be the subject for discussion in a joint meeting of the American Society of Mechanical Engineers and the American Institute of Mining Engineers to be held here on Monday, February 10, in the Junior Ball Room of the Mayo Hotel. The meeting will be opened at 6:00 p.m., with a dutch supper to be followed by three papers as follows: "Straight AC Electric Drilling, Purchasing Power from High Lines and Motor Generating Units for Rotary Drilling," D. M. McCargar, Allis-Chalmers Manufacturing Company, Tulsa; "Engine Electric Drilling Methods," B. H. Berkley, Westinghouse Electric Company, and "Progress in Steam Drilling Equipment," Weaver Smith, the Broderick Company, Muncie, Indiana. W. H. Carson, head of the mechanical and petroleum engineering schools at the University of Oklahoma, will preside over the meeting.

MOTOR TRANSPORT

Tulsa.—H. D. Patridge, manager of purchases for Indian Territory Illuminating Oil Comapny, Bartlesville, as the new president of the Petroleum Motor Transport Association of Oklahoma, announced, in the first meeting of the new year, that the motto would be, "A definite program for every meeting, a definite time of starting and a definite time for adjournment." One of the principal points brought out in the meeting which followed the dinner was the fact that under Oklahoma law pulling units should be licensed not on the weight but on the rated horsepower of the unit. The act specifies a license rate of 50 cents per horsepower for the first year, 40 cents for the second year, 20 cents for the third year, and 10 cents for the fourth and subsequent years. This point, which was brought up by G. C. Richardson, Indian Territory Illuminating Oil Company, was said to have saved one company more than $2400. It was also announced that this ruling would apply to core drill and geophysical units as well as pulling units.

Following the appointment of committees President Patridge announced that W. T. Howard had been transferred to Chicago, leaving a vacancy in the board of directors. G. L. Wheatley, Wheatley Brothers, Tulsa, was elected to succeed Howard.

NO ORDER FOR COKE

Austin.—The Texas Railroad Commission has in effect no order which requires a tender for the movement of coke produced by Texas refineries. This ruling was made Friday by Assistant attorney General W. J. Holt. An East Texas refiner had requested a tender to move 300 tons of coke and the application had been held up pending an opinion from torney General W. J. Holt. An East Texas commission had this power under authority of the statute which gives them control of crude oil produced in Texas or products refined therefrom within the state. He pointed out, however, that the orders issued had not contemplated coke nor did commission records indicate that this had been considered.

Prices Unchanged

MARKETS UNSTEADY AS COLD WEATHER CUTS CONSUMPTION

THE general market situation has continued mostly unchanged from a week ago. On the one hand there has been encouragement from the prospect of early curtailment of crude production in California. On the other hand, there has been continued unsteadiness of the markets generally because of the exceptionally severe and long sustained cold weather, embracing most of the country.

The overproduction of crude in California and the accompanying weak markets on the West Coast have represented probably the most serious unfavorable factor in the general market picture. Therefore, the outlook has been materially improved by the promise of early application of effective curtailment in that region. It is indicated that the California producers soon will cut that state's crude output down at least near the 537,000 barrels daily that is the goal. If the production is reduced to that level, the crude prices are to be raised about five to 20 cents a barrel.

So far, the California output actually has not been reduced materially, from the level of about 675,000 barrels per day that has been prevailing for about two months. Meanwhile, the refined oil market on the West Coast has been marking time, pending definite developments regarding crude production curtailment. In the southern part of the state, particularly, the retail prices have been depressed for considerable time.

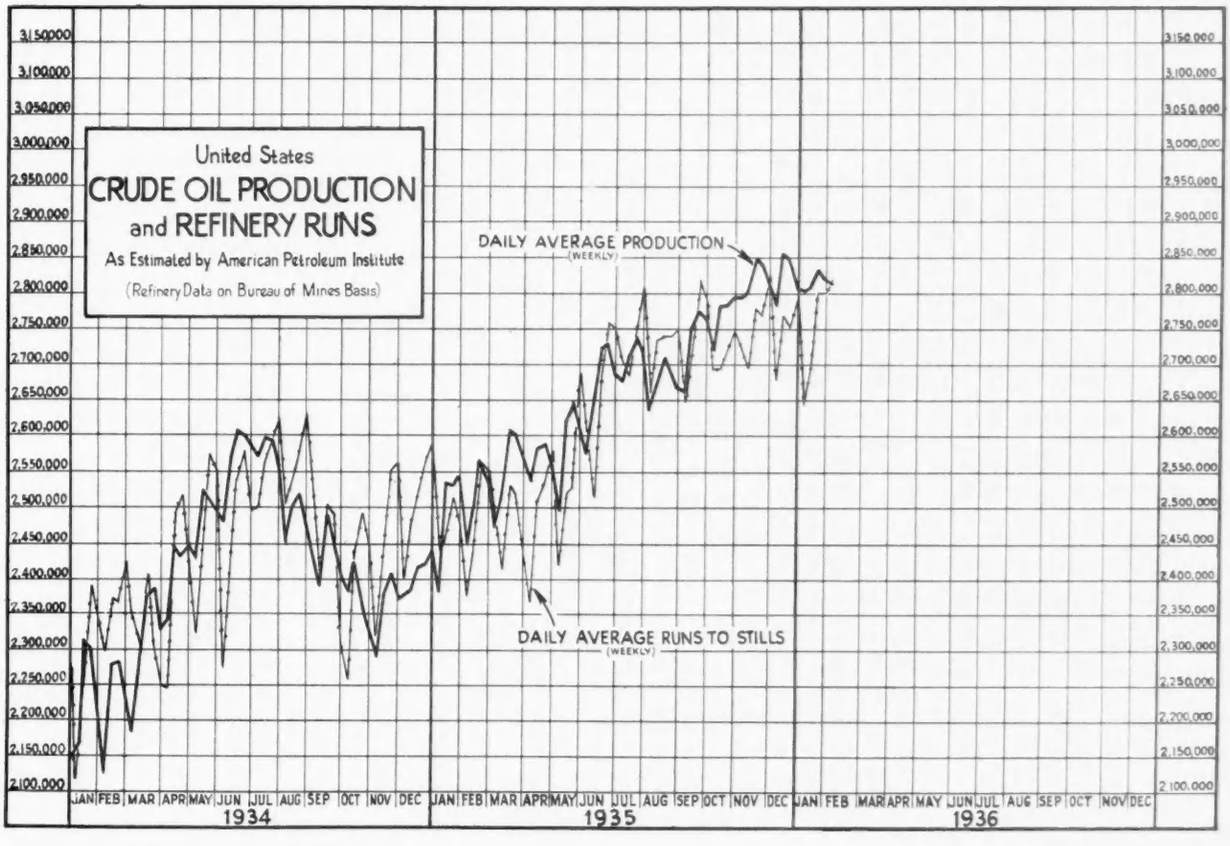
Low Demand in Mid-Continent

In the Mid-Continent the tank car market has continued unsteady due to the long siege of bleak weather, and further weakness of the market is in prospect until the weather abates and motoring resumes normal proportions. During the past week the wholesale refined oil prices in the Mid-Continent were holding around the levels of a week previously, but the unsteadiness of the markets was shown by the fact retail postings of independent stations in Texas were a cent lower in some instances than two weeks or so before.

Reports from East Texas indicated that over 350 tank cars of gasoline above normal were standing on railroad sidings, awaiting buyers. In the meantime, the refiners there had practically filled all available storage tanks in hope of better weather, and some were reported to be getting panicky. It was believed that some of the refiners would have been willing to quote lower prices in order to move their surplus gasoline, but that they were not encouraged to take such a course in the realization that buyers would be scarce at any price, because of the sharply curtailed consumption.

Considerable pressure was being exerted to induce the major companies to increase their purchases. But the major concerns were in the same boat as the independents in regard to getting rid of the motor fuel during the continuation of the bad weather. The large companies did yield somewhat, however, and absorb slightly more than 200 tank cars of gasoline, it is indicated by the latest weekly figures on the activities of the buying pool.

It is believed that East Texas hot oil activities are continuing at the comparatively insignificant proportions of the past several months, although the recent sharp curtailment of gasoline shipments has made it virtually impossible to obtain a close estimate. The estimates on hot oil



volume and refinery throughout are based largely on accounted-for gasoline shipments. Consequently, entirely accurate estimates will not be available until the plants resume shipping motor fuel as produced.

OKLAHOMA MARKET

Adverse weather lowers demand for motor fuel

Tulsa.—The Group 3, Oklahoma, refined products market last week was typical of February conditions, as exceedingly cold weather prevailed throughout most of the consuming area and many principal highways were impassably blocked in the northern territory, causing a dampening effect on motor fuels.

The effect of these conditions was shown particularly in the spot market, where jobbers were holding stocks of sufficient size to take care of their present trade with a minimum of current buying. Shipments under contract were reported moving steadily, and burning oils, as would be expected, were headed for higher levels under demand stimulated by subfreezing and sub-zero temperatures during the past three weeks.

Refiners were watching for possible effects of the conference of independent refiners, marketers, and jobbers in session in Chicago from Tuesday until Friday.

Prices to wholesale jobbers with bulk storage or to the trade in tanker lots of 8000 to 10,000 gallons, f.o.b. refinery, Group 3 (Oklahoma), exclusive of all federal, state and other taxes and handling charges, appeared to be as follows:

U. S. motor, 62 and below octane, third grade, 5¼ to 5⅜ cents; 63 to 70 octane, regular, 6⅛ to 6¼ cents; 71 and above octane, premium, 6¼ to 6⅜ cents; 60-62, 400 e.p., 62 and below octane, 5¼ to 5⅜ cents; 63-70 octane, 6⅛ to 6⅜ cents; 64-66, 375 e.p., 5¼ to 5½ cents; and 68-70, 350-360 e.p., 5⅜ to 5⅝ cents.

Burning Oils—42-44 water white kerosene, 3⅝ to 3¾ cents; 41-43 water white kerosene, 3⅜ to 3¾ cents; 38-40 prime white distillate, 3⅜ to 3½ cents; 38-40 straw zero, 3¼ to 3⅜ cents; 32-36 straw zero gas oil, 2¾ to 3 cents; 32-36 dark industrial gas oil, 2⅛ to 2½ cents; and fuel oils 16 to 30 gravity, 60 cents to $1.10 per barrel.

Natural gasolines in the 26-70 range were easy at from 4 to 4⅛ cents.

East Texas Tank Car Shipments

Week Ending February 2, 1936

PRODUCTS	No. Cars	Estimated Gallons
Gasoline	422	3,448,363
Fuel Oil	282	2,723,456
Casinghead Gasoline	152	1,275,004
Distillate	65	523,923
Gas Oil	40	326,249
Kerosene	20	157,746
Topped Crude	5	51,143
Residuum	5	40,490
Naphtha	1	8,058
Total	992	8,554,432
Total previous week	962	8,193,668
Intrastate	358	.....
Coastwise	317	.....
Interstate	317	.....
Total	992	.....

MARKET UNCHANGED

California shows slight progress in curtailment

Los Angeles.—There has been no material change in the petroleum market in California the past two weeks, although in a few isolated instances the retail price of gasoline in the general Los Angeles area has shown a slight weakness in that some dealers have reduced the retail price to 9½ cents. The situation in the San Joaquin Valley and in the San Francisco area is holding fairly firm with no marked reduction in selling prices.

Independent refiners in the Los Angeles area have formed the Independent Refiners Association of California and have asked for a state charter. After the charter is issued, the association will ask United States authorities to approve its plans. William S. Scully has been retained by the new association as general counsel and general manager. He has served as special attorney to the Petroleum Administration Board in Washington, as special assistant to the United States Attorney General and handled for the government the Kettleman Hills royalty case in California. He also acted as special representative of Secretary Ickes in California with reference to the Pacific Coast Petroleum Agency while the code was in effect.

The organization of these independent refiners may mean a stabilization of marketing conditions, but those prominent in the formation of the association are not talking any for publication until all plans are formulated and properly approved.

The movement in California to curtail production to close to 537,000 barrels a day is making some progress, but it is seriously doubted if daily production will be reduced to less than 550,000 barrels.

WEATHER HURTS

East Texas refiners are being overstocked

Tyler.—No relief is in sight for East Texas refiners caught with a big surplus of gasoline stocks due to adverse weather conditions. Shipments have been restricted for several weeks to purchases made by the major company buying pool, involving about 200 cars of federal tendered motor fuel per week, and sales made within the state. The plant owners have been temporarily excluded from interstate markets, and to forge a market would have to lower their quotations to 4½ cents per gallon and less. This compares with a price of 5⅛ cents paid by the majors for the same quality of motor fuel.

Plant owners have made sharp reduc-

Summary of Wells Completed in the United States
Week Ending February 8, 1936

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1936	Total Completions this date 1935
Alabama	....	....	....	....	.....	....	....
Arkansas	2	1	....	1	500	7	29
California	21	18	....	3	18,305	88	80
Colorado	....	....	....	....	.....	....	1
Illinois	....	....	....	....	.....	....	4
Indiana	....	....	....	....	.....	23	16
Kansas	20	13	2	5	11,034	109	139
Kentucky	....	....	....	....	.....	....	12
Louisiana	9	5	2	2	2,423	56	80
Michigan	9	3	1	5	360	77	38
Mississippi	....	....	....	....	.....	....	4
Montana	3	1	1	1	900	13	7
New Mexico	7	6	1	....	17,426	29	28
New York	....	....	....	....	.....	....	....
Ohio	40	15	14	11	405	144	176
Oklahoma	39	31	....	8	49,895	243	215
Pennsylvania	....	....	....	....	.....	....	21
Texas	225	168	9	48	320,118	1,004	1,190
Utah	....	....	....	....	.....	....	....
West Virginia	16	2	11	3	7	60	40
Wyoming	1	1	....	....	3,120	5	1
Total this week	392	264	41	87	424,493	1,858	2,081
Total last week	352	232	33	87	183,362	....	....
Total this year	1,858	1,224	189	445	1,962,688	....	....

Comparison of Permits Granted for New Wells

STATE	Week Ending Feb. 8	Total this Mo.	Total this Year	Total this Date last Year	1935 Year Total
Arkansas	3	3	8	24	70
California	20	20	60	78	925
Louisiana	54	54	125	83	846
Kansas	31	31	148	174	1,204
Michigan	13	13	69	44	749
Oklahoma	37	37	229	220	2,311
Texas	281	281	1,035	1,491	10,800
Total	439	439	1,674	2,114	16,964

tions in crude runs to stills as a means of forestalling a collapse of the price structure. Crude throughout the past week is reported to have averaged less than 40,000 barrels daily, including about 35,400 barrels daily of legally produced and purchased oil. Hot oil production has likewise sustained a big drop in volume, and generally conceded to be less than 10,000 barrels daily.

PRODUCTION DROPS

New rate is encouraging as California curtails

THE crude oil production situation last week was the most satisfactory for several months, as California output was curtailed sharply, to the lowest level since the week ended October 5.

After having averaged around 675,000 barrels daily for more than two months, California production last week dropped 45,000 barrels daily, or to 631,000 barrels per day, reflecting the early results of the voluntary curtailment program that has been launched in the state.

In other states, also, there was fair success in restricting production, with the result that the nation's output was within 103,700 barrels of the daily average recommended for February by the Bureau of Mines. That was the nearest approach to the bureau's estimates of demand for many weeks, the recommendations previously having been greatly exceeded at times.

For last week, that is, the period ended February 8, the United States production averaged 2,751,800 barrels daily, or 63,725 barrels a day less than in the previous week.

The decrease was due largely to the 45,000-barrel decline in California, but Oklahoma, Kansas, and Louisiana also showed some decreases, while Texas output was up slightly.

Despite the 45,000-barrel decline for the week, California in averaging 631,000 barrels per day still was about 100,000 barrels above the Bureau of Mines estimated of demand. The state, therefore, was largely responsible for the whole excess for the country during the week, the national recommendation having been exceeded only by 103,700 barrels per day.

The California producers have as their goal a curtailment of output to 537,000 barrels per day, or almost to the Bureau of Mines recommendation, and consequently last week they still were producing an excess of almost 100,000 barrels per day. If and when the desired reduction is achieved, the crude prices in the state will be raised from about five to 20 cents a barrel.

Oklahoma last week averaged 487,575 barrels per day, or about 10,000 barrels daily less than in the previous week, and was within about 4000 barrels of the indicated demand.

Kansas output declined about 5000 barrels, to 131,575 barrels per day, and was, therefore, about 6000 barrels under the government estimate of demand.

Like Kansas, Texas last week showed less output than the Bureau of Mines recommendation, having averaged

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

DISTRICT OR STATE	BARRELS DAILY FOR WEEK ENDING February 8	February 1
TEXAS—		
Texas Panhandle	60,500	60,100
North Texas	56,600	56,700
West Central Texas	25,400	25,400
West Texas	147,700	147,000
East Central Texas	44,100	43,800
*East Texas Field	434,200	433,200
†South Texas	68,700	68,200
†Texas Gulf Coast	205,600	204,100
*Total Texas	1,042,800	1,038,500
OKLAHOMA—		
Oklahoma City	139,150	137,725
Seminole Area	114,550	120,800
Tatums	3,600	3,750
Lucien	10,300	10,100
Fitts	32,100	37,825
Edmond	6,725	6,325
Others	181,150	180,750
Total Oklahoma	487,575	497,275
KANSAS—		
Ritz-Canton	7,100	7,150
Voshell	3,425	3,350
Nikkel-Hollow	5,025	4,875
Sedgwick	5,725	6,075
Oxford	6,750	7,275
Burrton-Haury	13,100	12,350
Lorraine	8,275	8,275
Others	82,175	87,825
Total Kansas	131,575	137,175
LOUISIANA—		
North Louisiana	50,925	55,450
Louisiana Gulf Coast	131,600	131,500
Total Louisiana	182,525	186,950
ARKANSAS	29,925	29,825
CALIFORNIA—		
Long Beach	73,500	76,000
Santa Fe Springs	47,500	54,000
Huntington Beach	39,500	42,000
Dominguez	30,500	30,000
Inglewood	13,000	14,500
Ventura Avenue	36,000	41,500
Seal Beach	9,500	7,000
Midway-Sunset	61,500	61,000
Elwood	14,500	16,000
Kettleman Hills	92,000	96,500
Mountain View	31,500	35,000
Playa del Rey	14,500	16,500
Others	167,500	186,000
Total California	631,000	676,000
MOUNTAIN STATES—		
Wyoming	33,700	34,700
Montana	13,100	12,800
Colorado	4,000	4,000
Total Rocky Mountain States	50,800	51,500
NEW MEXICO	58,000	58,000
EASTERN STATES	98,100	100,200
MICHIGAN	39,500	40,100
*Total United States	2,751,800	2,815,525
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	8,000	7,000
Grant Total, including surreptitious production	2,759,800	2,822,525

† Coastal District of South Texas is included with Texas Gulf Coast.

Crude Runs to Stills; Stocks of Finished and Unfinished Gasoline and Gas and Fuel Oil, and Cracked Gasoline Production, Week Ended February 1, 1936

(Figures in thousands of barrels of 42 gallons each, reported by American Petroleum Institute)

DISTRICT	Daily Refining Capacity			Crude Runs to Stills		Stocks of Finished and Unfinished Gasoline				Stocks of Gas and Fuel Oil			Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
		Reporting				Finished								Reporting		
	Potential Rate	Total	%	Daily Average	% Operated	At Refineries	Terms. Trans. Pipe Lines	Unfinished in Naphtha Distillates	Total Finished and Unfinished	Gas Oil & Distillate	Residual	Total	Potential Rate	Total	%	Daily Average
East Coast	612	612	100.0	492	80.4	4,796	9,447	982	15,225	3,064	3,824	6,888	534	534	100.0	95
Appalachian	154	146	94.8	97	66.4	1,305	996	273	2,574	.....	.....	675	79	78	98.7	20
Ind., Ill., Ky.	442	424	95.9	333	78.5	5,534	3,537	796	9,867	1,155	1,713	2,868	349	348	99.7	86
Okla., Kans., Mo.	453	384	84.8	266	69.3	3,775	2,273	563	6,611	835	2,285	3,120	256	228	89.1	70
Inland Texas	330	160	48.5	108	67.5	1,256	24	190	1,470	271	1,257	1,528	148	105	70.9	29
Texas Gulf	680	658	96.8	625	95.0	5,691	267	1,773	7,731	3,326	5,608	8,934	399	393	98.5	125
Louisiana Gulf	169	163	96.4	118	72.4	932	408	211	1,551	1,377	2,260	3,637	77	74	96.1	27
North La.,—Ark.	80	72	90.0	44	61.1	215	94	66	375	226	362	588	46	44	95.7	8
Rocky Mountain	97	60	61.9	34	56.7	1,063	.....	92	1,155	169	564	733	46	39	84.8	10
California	852	789	92.6	507	64.3	8,905	2,313	1,271	12,489	.....	.....	69,897	280	280	100.0	61
Reported	.....	3,468	89.6	2,624	75.7	33,472	19,359	6,217	59,048	.....	.....	98,868	.....	2,123	95.9	531
Estimated Unreported	.....	401	.....	196	.....	2,259	918	402	3,579	.....	.....	4,639	.....	91	.....	34
*Estimated Total U.S. February 1, 1936	3,869	3,869	.....	2,820	.....	35,731	20,277	6,619	62,627	.....	.....	103,507	2,214	2,214	.....	565
*Estimated Total U.S. January 25, 1936	3,869	3,869	.....	2,800	.....	33,890	19,655	6,469	60,014	.....	.....	104,754	2,214	2,214	..	575
U.S.B. of M. Jan. 1935	.....	.....	.....	2,434	.....	†33,224	†20,042	†5,339	†58,605	.....	.....	†104,174	.....	.....	.....	509

*Bureau of Mines basis currently estimated. †As of January 31, 1935. On March 31, 1935 total stocks finished and unfinished gasoline were 66,290,000 barrels.

1,042,800 barrels daily, or about 25,000 barrels per day less than the indicated demand, although about 4000 barrels a day more than in the previous week. However, a higher Texas allowable for February is due to be reflected in the figures for the coming week.

Louisiana production last week averaged 182,525 barrels daily, or about 4000 barrels less than in the previous week. Although this output was close to the allowable prescribed by the Louisiana state government, it was about 40,000 barrels per day more than the Bureau of Mines recommendation.

WILDCAT SHOWS

Tyler.—Recovery of thin sand section carrying oil saturation with trace of gas from the Paluxy horizon at 4205 feet by C. N. Housh, Thompson and Bob Peveto's projected Trinity sand test on the Carr 542-acre lease, M. V. Delgado Survey, northwestern Titus County, caused a temporary halt in operations late last week. Three unsuccessful attempts were made with formation tester, and the owners plan to make another try before drilling is resumed.

Gulf Oil Corporation is reported to be planning to continue to the Trinity zone with McCullom 1, failure in the Woodbine horizon on the Alba structure, southwestern Wood County, with drilling in progress below 4800 feet. Formation tester used in Woodbine sand section at 4381-4405 yielded salt water. Top of red beds was logged at 4457 feet, with an elevation of 456 feet.

SAFETY MEETING

Tulsa.—A safety conference and safety meet, which will demonstrate how safety programs in the oil industry are saving thousands of lives yearly, has been planned for the ninth International Petroleum Exposition to be held in Tulsa, May 16 to 23, according to J. H. Savage of Mid-Continent Petroleum Corporation, who is general chairman of activities.

The conference will be held Thursday, May 21, with R. S. Huffman, chairman, Mid-Continent division, petroleum section, of the National Safety Council, presiding. Speakers will include:

R. B. Roaper, general chairman, petroleum section, National Safety Council, who is safety director for Humble Oil & Refining Company, Houston, on the subject "Activities of the Petroleum Section."

H. N. Blakeslee, director of accident prevention, American Petroleum Institute, Dallas, Texas, on "The Use of Statistics in a Safety Program."

R. S. Bonsib, safety director, Standard Oil Company (New Jersey), New York, N. Y., on "After the Whistle Blows."

W. H. Cammeron, managing director and W. Dean Keefer, director industrial division of the National Safety Council, who will discuss if they can be present, "Keeping Executives Interested in Safety," and "Where Do We Go from Here."

C. W. Smith, general chairman, American Society of Safety Engineers and Safety Directors, Standard Oil Company (Indiana), Chicago, on "Some Problems of Respiratory Protection and Their Solution."

H. W. Boggess, superintendent of safety, Sinclair Prairie Oil Company, Tulsa, on "A Safety Program for Scattered Units of Production."

S. E. Whitings, assistant chief engineer, Liberty Mutual Insurance Company, Boston, Massachusetts, on "Fire Hazards of Electrical Equipment."

A special exhibit of safety appliances by manufacturers is being arranged by the committee.

Friday the first aid contests will be held on the main street of the exposition grounds and more than 20 teams are expected to be entered. At the last International Petroleum Exposition held in 1934 there were 21 teams and the winners were from Humble Oil & Refining Company, Houston; Shell Petroleum Corporation, Arkansas City, Kansas; and Continental Oil Company, Ponca City, Oklahoma.

Friday night a banquet will be held for the presentation of awards, and the speaker is A. A. Nicholson of The Texas Company, New York City, N. Y.

The committee working under Savage includes: G. O. Lockwood, Empire Companies, Bartlesville, Oklahoma; D. J. Wallace, Sinclair Prairie Oil Company, Tulsa; R. S. Huffman, Oklahoma Natural Gas Corporation, Tulsa; Kraus Earhart, The Texas Company, Tulsa; Tom Lyttle, Empire Companies, Tulsa; and H. T. Market, Phillips Petroleum Company.

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to February 7, 1936)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$0.94	2¢	40—$1.18	1- 9-36
N. and N.-C. Texas	28— .84	2¢	40— 1.08	1- 9-36
Texas Panhandle				
Gray County	34— .86	2¢	40— .98	1- 9-36
Carson-Hutchinson	34— .81	2¢	40— .93	1- 9-36
West Texas				
Ector, Pecos, W'kler, Crane, Upton, Howard and Glasscock	29— .76	2¢	36— .90	1-14-36
West Central Texas	28— .84	2¢	40— 1.08	1- 9-36
East Central Texas	28— .91	2¢	40— 1.15	1- 9-36
East Texas	*1.15			1- 9-36
Texas Gulf Coast				
Anahuac-Dickinson	30— 1.04	2¢	40— 1.24	1- 9-36
Conroe	35— 1.24	2¢	40— 1.34	1- 9-36
Tomball	*1.30			1- 9-36
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 17— .88	2¢	34— 1.22	1- 9-36
South and S. W. Texas	Below			
Refugio (Light)	17— .88	2¢	34— 1.22	1- 9-36
Refugio (Heavy)	*.90			1- 9-36
Saxet	*.90			1- 9-36
Mirando	*.85			1- 9-36
Pettus	*1.25			1- 9-36
Salt Flat	*.97			1-14-36
Darst Creek	*.97			1-14-36
Port Lavaca	*.97			
Plymouth	*.90			12-17-35
Arkansas				
El Dorado (Light) and Rainbow	25— .78	2¢	40— 1.10	1-10-36
El Dorado East Field and Smackover	*.75			1-10-36

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
North Louisiana	25—$0.78	2¢	40—$1.10	1-10-36
Urania	*.97			1-10-36
South Louisiana	Below			
Lockport	19— .92	2¢	34— 1.22	1- 9-36
Iowa, Cameron Mds.	Below 19— .82	2¢	34— 1.12	1- 9-36
Rocky Mountain States				
Salt Creek	29— .94	2¢	40— 1.18	1-10-36
Elk Basin	*1.28			1- 9-36
Grass Creek (Light)	*1.28			1- 9-36
Grass Creek (Heavy)	.58			1- 9-36
Big Muddy	*1.11			1- 9-36
Rock Creek	*1.12			1- 9-36
Sunburst	*1.25			1- 9-36
Lance Creek	*.90			1- 9-36
Osage	*1.08			‡
Cat Creek	*1.07			8-25-33
Cut Bank	*1.45			9-29-33
Pondera	*1.05			9-29-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	*.75			9-29-33
Mid-West States				
Lima	*1.25			1-10-36
Illinois	*1.23			1- 9-36
Princeton	*1.23			1- 9-39
Western Kentucky	*1.23			1- 9-36
Pennsylvania				
Bradford	*2.45			1-13-36
Sw. Pa. Pipe Line	*2.17			1-13-36
Eureka Pipe Line	*2.12			1-13-36
Buckeye Pipe Line	*1.97			1-13-36
Corning Grade	*1.42			1-13-36
Michigan				
Central Michigan	*1.12			11- 7-35
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.

MAJOR PRICE CHANGES

	Penns. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
May 22, 1933	Up 10	.....	.....
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 13	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
August 11, 1933	Up 10	.....	.....
August 24, 1933	.....	Up 10	.....
August 30, 1933	Up 15	.....	.....
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25	.....	.....
January 4, 1935	Up 15	.....	.....
February 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
August 29, 1935	.....	.....	Cut °46
September 6, 1935	Up 5	.....	.....
October 28, 1935	Up 15	.....	.....
November 1, 1935	.....	.....	Up °28
November 18, 1935	Up 15	.....	.....
December 6, 1935	.....	.....	Up °9
January 9, 1936	.....	Up 10	.....
January 13, 1936	Up 15	.....	.....

* All gravities—flat rate.
° Signal Hill 26 gravity.

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅜ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

CALIFORNIA OIL PRICES

(All gravities above those quoted take highest prices of that field
Effective December 6, 1935)

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River Round Mountain	Mountain View	Midway Sunset Elk Hills Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14–18.9	$.75	$.74	$.73	$.74	$.75	$.71	....	....	$.75	$.71	$.71	$.72	$.73	....	$.65	...	$.65	$.65	$.65	....
19–19.9	.75	.74	.74	.77	.76	.75	....	....	.77	.71	.71	.72	.73	....	.65	$.65	.66	.68	.66	.65
20–20.9	.76	.74	.76	.79	.79	.77	....	....	.78	.71	.73	.72	.73	....	....	.65	.68	.71	.67	.65
21–21.9	.78	.74	.78	.81	.81	.79	....	....	.80	.71	.75	.72	.75	$.73	....	.65	.71	.73	.69	.65
22–22.9	.80	.74	.80	.82	.84	.81	....	....	.81	.73	.77	.72	.77	.73	....	.66	.74	.75	.71	.67
23–23.9	.82	.77	.82	.84	.86	.83	$.79	....	.83	.75	.79	.74	.79	.73	....	.67	.77	.77	.73	.69
24–24.9	.84	.80	.84	.86	.88	.84	.81	F.O.B. Ship	.84	.77	.80	.76	.81	.75	....	.69	.80	.80	.75	.71
25–25.9	.86	.82	.86	.87	.91	.86	.83		.86	.79	....	.78	.82	.77	....	.71	.83	.82	.77	.73
26–26.9	.88	.85	.88	.89	.93	.88	.86		.88	.81	....	.80	.84	.79	....	.73	.86	.85	...	...
27–27.9	.90	.88	.90	.91	...	.90	.88		...	.83	....	.82	.86	.82	....	.76	.88	.88	...	...
28–28.9	.92	.90	.91	.92	...	.92	.90		...	.85	....	.83	.88	.84	....	.78	.91	.90	...	...
29–29.9	.94	.93	.93	.94		....	.93	....	....	.87	....	.85	.90	.86	....	.80	.94	.92	...	...
30–30.9	.96	.95	.95	.95		....	.95	....	....	....	....	.87	.92	.89	....	.83	.97	.94	...	...
31–31.9	...	....	...	.97		....	.97	....	Kettleman Hills			.89	.94	.91	....	.85	.99	...	...	...
32–32.9	...	....	...	.99		....	1.00	....				.91	.96	.93	....	.87	1.02	...	...	...
33–33.9	...	....	...	...	F. O. B. Pipe Line	....	....	$.99	$.95			.93	.98	.95	....	.89	1.04	...	...	...
34–34.9	...	....	...	...		....	....	1.01	...	.97	....	.95	1.00	.98	....	.91	....	....	....	....
35–35.9	...	....	...	...		....	....	1.03	...	.99	....	.97	...	1.00	....	....	....	....	....	....
36–36.9	...	....	...	...		....	....	1.05	...	1.02	....	.99	...	1.02	....	....	....	....	....	....
37–37.9	...	....	...	...		....	....	1.07	...	1.05	....	1.00	...	1.04	....	....	....	....	....	....
38–38.9	...	....	...	...		....	....	....	...	1.08	....	1.03	...	1.07	....	....	....	....	....	....
39–39.9	...	....	...	...		....	....	....	...	1.11	....	1.05	...	....	....	....	....	....	....	....
40–40.9	...	....	...	...		....	....	....	...	....	....	1.07	.	....	....	....	....	....	....	....

WORLD DEVELOPMENTS and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Oil Sanction

ITALY INDICATES PETROLEUM EMBARGO MAY CAUSE WAR

Italy plainly manifested last week she would consider inclusion of oil in the sanctions list imposed by the League of Nations as a military move to be countered by military moves. Thus, oil, never before rated as the direct cause of war between European countries, may be rated as such if the sanction against oil is imposed.

Notwithstanding Italy's oil has been furnished for years primarily by European member nations of the league, reticence of that organization to take a definite stand on the oil sanction subject has been explained clearly as due to the fact that it is not sure of the policy of the United States with reference to shipments of oil to Italy.

As a matter of record, figures released February 1 by the National Petroleum Association show that exports of crude and petroleum products from the United States to Italy and Italian Africa in 1935, amounted in value to only $9,777,620, a paltry sum in comparison with the value of oil shipments to Italy by some European nations belonging to the league. United States exports of crude and petroleum products to Italy and Italian Africa in 1934 totaled in value $6,066,780, an amount less than shipments in 1935, but not reflecting a true picture of the difference in bulk, due to ascending prices obtaining in 1935.

Press dispatches emanating from Geneva, Switzerland, the last day of January reported Italy had purchased from Romania sufficient oil to meet her requirements through the remainder of 1936, and had paid cash for the oil. It was rumored Italy might be able to get delivery on the Romanian oil despite any efforts of the league to block shipment. These reports call for explanation in connection with the statement of a leading member of the league February 3 that a report should be prepared to show the practicability of an oil sanction if the United States, a non-member of the league, imposed an oil embargo against Italy. The individual proposed also the preparation of a second report showing what effect the sanction would have if the American department of state did not declare the embargo.

Parenthetically the Associated Press declared that Virginio Gayda, Italian writer and friend of Mussolini, warned in an article published in Rome February 3 that an oil embargo would mean a blockade and that a blockade would precipitate a world war.

Progress toward establishing the sanction, characterized to date by much vacillation, was broadened in the February 3 meeting of the league by suggestions that to be effective the sanction must involve also oil tankers. It was argued that non-league countries could loan tankers to Italy and then borrow vessels from sanctionist nations to serve their own needs.

In the same meeting it was predicted that an oil sanction against Italy would work if the United States would restrict its shipments to the eight percent of Italy's requirements she now meets. It was interesting in this connection to observe that Dr. Cesar Zumeta, representing Venezuela, one of the ranking oil producing nations of the world, explained to the league committee that he was present at the meeting merely as a spectator. It is to be assumed that not all companies operating in Venezuela would be opposed to making shipments to Italy or Italian Africa, whether directly or to safe ports for re-consignment.

BAHREIN ACTIVE

Much construction and drilling work scheduled

Bahrein Island, located in the Persian Gulf, and the mainland of Arabia, immediately across the gulf from Bahrein, will be the scenes of considerable construction and drilling activity in 1936, according to word received by THE OIL WEEKLY February 5 from San Francisco.

Indications are Bahrein and the new field recently discovered by Bahrein Petroleum Company, subsidiary of Standard Oil Company of California, on the mainland will occupy a large percentage of space devoted to oil developments in the Near East.

The communication from San Francisco expresses an opinion that strata in the new field are similar to those underlying Bahrein, already a famously attractive commercial proposition, and that the new field will be found to underlie a considerable area of Arabia.

Wholesale construction work is now under way on the Island of Bahrein, more than 90 men having left the United States the latter part of 1935 to take part in erection of a large refinery, housing accommodations, machine shops, tool storehouses and miscellaneous lease structures, in addition to construction of increased facilities for loading tankers. All of this activity is scheduled to take place in 1936 in line with an anticipated growth in the role of Bahrein oil in world markets.

Regarding the new field recently discovered on the mainland across from Bahrein Island, while a production test in mid-December was pending arrival of equipment from the United States, the well head pressure on No. 1 test was ranging from 600 to 800 pounds per square inch, with indications of a bountiful supply of oil and gas. Surface geology and examination of cores from the well apparently justified belief it was on a structure of large proportions. Such a field, considering producing conditions in Bahrein, which it is said to resemble, possibly will constitute the greatest individual asset of Standard Oil Company of California.

Bahrein, for example, is said to be about the cheapest field in the world to drill and produce. The upper pay sand at Bahrein is found at about 2000 feet, and carries an average well head pressure of 450 pounds. The second commercially productive sand, found generally around 2600 feet, carries an average well head pressure of 650 pounds per square inch. The producing horizons are composed of limestone and sand, and all production to date from these horizons has been flowed. Pumping is not necessary, and the island is without a test as deep as 3000 feet.

RUSSIA'S EXPORTS

Measured by volume, petroleum exports of U. S. S. R. decreased 21 percent in the first nine months of 1935 as compared with the corresponding period of 1934, and the value of those exports decreased 34.2 percent, according to reports published by the general manager of customs of that country. Exports in the first nine months of 1935 totaled 2,396,414 tons; those of the first nine months of 1934 totaled 3,049,875 tons. Germany is the best European customer for Russia's petroleum exports, having taken 349,341 tons during the first nine months of 1935.

FEW SOVIET STRIKES

Reports of discoveries of a few new fields in U.S.S.R. during 1935 resulted in inquiries being sent by THE OIL WEEKLY to reliable authorities who have named only one area in Russia that may be classed as an oil field discovery—that located at Uch-Kysyl in southern Uzbekistan, close to the northern boundary of Afghanistan. The Soviet discovery well at Uch-Kysyl is reported to have pro-

duced 10,000 tons in the first 36 hours, or at the rate of about 9300 barrels per day. It is now shut in pending arrival of additional lease equipment.

The Russian pipe line recently completed from Guriev to Orsk, a distance of 465 miles, is a 12-inch line with a rated capacity of 29,000 barrels per day. Runs through this pipe line will supply the refinery now under construction at Orsk, said refinery to have a capacity of 28,000 barrels per day.

ENGLISH WILDCAT

If preliminary preparations are not unduly hampered by bad weather, D'Arcy Exploration Company is expected to spud by March, 1936, on a five-acre tract on the southern flank of Portsdown Hill, near Portsmouth, England.

An announcement of Anglo-Iranian Oil Company, Limited, parent company of D'Arcy Exploration Company, declares a second rig will be in use soon on another English wildcat location in Sussex.

AUSTRALIA

Dr. Arthur Wade, geologist with Freney Kimberley Oil Company, has returned to Perth, Western Australia, after making a geological survey in the interior of the northern part of the commonwealth. A major portion of the work consisted of aerial mapping, concerning which Dr. Wade writes:

"A smash up is not what we fear most in the aerial work in Northern Australia. It is the impossible distances we should have to travel to obtain help and the needle-in-a-haystack sort of business somebody would have in looking for us—the scarcity of things you could keep body and sleeves together on, and the very remote chance of finding any water."

PAGE KING SOLOMON!

Are the physical remnants of a vanished race more important to present day civilization than liquid gold?

This rather delicate matter has come up unexpectedly for a decision in the ministry of education because of well drilling in El Tajin archaeological zone, State of Veracruz, Mexico, where the pyramids and other ruins of pre-Columbian Americans are reported to be imperilled.

Archaeological experts of the ministry are represented as holding the view that the zone under exploitation by a petroleum company promises to become one of the richest "finds" of early Mexican history. It is, in fact, said to be a veritable cluster of pyramids in a city of ruined buildings of rarely beautiful archaeological designs. One of the best examples of the artistry of an early continental civilization—a pyramid—has already been badly damaged by a well, according to the ministry, and so the question has become one in which national interests are involved.

Is art of the past ages, after all, to be preserved at the sacrifice of one of the essentials of humanity? Who but a modern Solomon—and Solomon must have really known the intrinsic value of pyramids—would hazard the decision?

Important Finds

BILLINGS GETS WILCOX WELL AND HEWITT WILDCAT IS SHOWING

WEEKLY STAFF REPORT

Tulsa.—Discovery of Wilcox sand production in the old Billings pool of western Noble County, the finding of a heavy grade of black oil in a Carter County wildcat test, and a spurt of activity in the Fitts pool were the principal bright spots in an otherwise dreary week in Oklahoma field development. Several important wildcat tests were either starting or already under way but at shallow depths in scattered counties. Principal among these were two in Garfield County where a number of attempts have been made to extend the Nemaha Ridge and Blackwell trends during the past two or three years.

By virtue of the extensive campaign in the Fitts pool Pontotoc County had the lead in new work with a total of 10 first reports; Osage was second with nine; Creek had four; Kay and Seminole, three each; Comanche and Marshall, two each; and Kiowa, Stephens, Lincoln, Oklahoma, Hughes and Okfuskee, one each; a total of 39 for the week.

Completions for the week were routine, of the 43 there being 31 oil wells rated initially at 49,895 barrels, eight dry holes and four abandoned locations all of which accounted for 102,219 feet of completed drilling. This was divided as follows: three wildcat dry holes, 9903 feet; six old wells drilled deeper, 2240 feet; and 34 others, 90,076 feet.

A NEW DISCOVERY

Carter County well has 800 feet of heavy oil

Ardmore.—A wildcat discovery one-half mile from production in the Bayou or Southeast Hewitt pool was the feature news of the week in the southern part of the state which continues to get a wide play in both leasing and development. One of the sectors now receiving major attention is the Caddo Anticline just north of Ardmore in the northern part of Carter County.

Southeast of Hewitt

The Texas Company and J. H. Hudson's Cathey 1, SE NE NE 6-5s-1w, 11 miles west of Ardmore and one-half mile from production in the old Bayou or Southeast Hewitt pool in western Carter County, was the center of attraction in southern Oklahoma during the week, although the 800 feet of fluid standing in the hole was heavy black oil of about 25 gravity. The first indication of production came at 4098 to 4118 feet and at 4135 to 4157 feet, in which intervals cores showed saturation several weeks ago. The 8⅝-inch casing was cemented at 4095 feet and plugs drilled early in the week. The hole was being cleaned out and will be deepened.

In the old Fox pool of northwestern Carter County, Carter Oil Company et al's Williams 1, SW NE SW 27-2s-3w, had been redrilled to 7270 feet and operators were reaming the hole from 6855 feet to bottom. There are no indications that the hole is not in good shape from 6089 feet, where the whipstock was set, to the present total depth.

In northwestern Love County, Sinclair Prairie Oil Company was reported redrilling the hole below 6000 feet at Stockton 1, SE SE SW 26-6s-2w, 16 miles northwest of Marietta and 12 miles southwest of the old Brock pool. This test was drilled to 7165 feet where drill pipe was stuck. A whipstock was set at 5406 feet after the pipe had been removed above that point. Five miles northeast of Marietta in the northeastern part of the county Amerada Petroleum Corporation and Stanolind Oil & Gas Company's Westheimer 2, SW SE SW 27-6s-2e, was drilling below 5250 feet in dense lime which may be the Arbuckle.

WILCOX AT BILLINGS

Old field to be revived by important strike

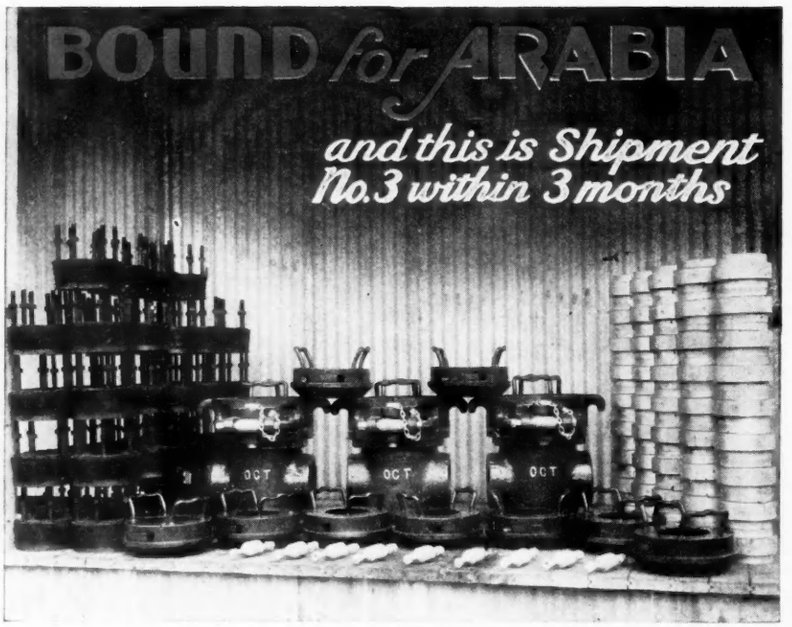
Tulsa.—Phillips Petroleum Company and Shell Petroleum Corporation's McCaugthry 1-A, NW NE NE 21-23n-2w, in the old Billings pool of northwestern Noble County, was probably the most interesting development of the week as it started heading and flowed 65 barrels of oil in 45 minutes from Wilcox sand topped at 4242 feet and drilled to 4256 feet, the total depth. The plug had just been drilled and the hole was not cleaning itself rapidly due to the small amount of gas. Attention was first attracted to this old producing area in June, 1935, when Midco Oil Corporation's Yost 1-A, SW NE NW NE 22-23n-2w, topped Arbuckle lime at 4240 feet and logged 17 feet of saturated lime to 4257 feet, the total depth. When first opened it started

heading and shortly afterward was flowing at the rate of 400 barrels per hour through tubing. Gravity of the oil is approximately 46 degrees. After flowing 4500 barrels of oil the well started cutting about 50 percent water and was plugged back to 4204 feet with cement. The plug was drilled out to 4227 feet and the well completed for 502 barrels in November, 1935, after operators had experienced considerable difficulty.

It will be noted that McCauthry 1-A encountered Wilcox sand at about the same depth below the surface that Yost 1-A found Arbuckle lime. Since the wells are almost a mile apart a sharply truncated pre-Pennsylvanian structure is indicated. The Billings pool was discovered in February, 1917, by Midco Oil Corporation, but prior to completion of the Yost 1-A it had not produced from anything lower than the Tonkawa series at approximately 2600 to 2800 feet. That the new Wilcox find will precipitate a campaign to define its position and importance as a flank sand is probable.

Continental Oil Company et al staked location about a week ago and were moving in tools for Branson 1, SW SW SE 23-24n-3w, 22 miles northeast of Enid in northeastern Garfield County. It is located on a seismograph "high" worked by Continental and later checked by Marathon Oil Company. Both of these operators own acreage in the area and Herndon Drilling Company owns an interest in the test which will be a community affair.

Ten miles southeast of Enid, Stanolind Oil and Gas Company, Amerada Petroleum Corporation et al were digging cellar and pits for No. 1, SW SW NE 32-22n-4w, three and one half miles southwest of production in the Garber pool. It is on a block assembled by Stanolind.



The third Arabian shipment, shown here, includes 3 O-C-T Type "D" Blowout Preventers, 45 Reducing Bushings, 45 Packoff Assemblies, 9 Wear Rings and 9 extra Eccentric Band Springs.

The first of these three orders for O-C-T Type "D" preventers for shipment to Arabia followed a check over long periods of the outstanding performance in Mid-Continent fields.

This inexpensive preventer is permitting the operator to rotate or work pipe up and down, keeping drill pipe in motion while fighting the well with heavy mud. This eliminates the sticking of drill pipe, the cost of which would be many times over the cost of the preventer.

A copy of our Catalog will be sent you upon request.

Selling Through Supply Stores

OIL CENTER TOOL CO.

QUALITY O-C-T PRODUCTS

HOUSTON, TEXAS, U.S.A.

Cable Address "OCENTOL"

OKLAHOMA

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
ATOKA COUNTY—		
Shannon, Garner 1, ne nw ne 27-1n-15e	*	825
CARTER COUNTY—		
Samedan Oil Co., Eaves 2, nw sw ne 6-2s-2w	97	2103
CREEK COUNTY—		
Moasco Oil Co., Mock 1-A, nw nw sw 16-18n-7e	*	1636
Big Four Pet. Co., Anthis 1, nw nw nw 12-18n-8e	22	2605
Swart 2, cnl nw sw 35-19n-8e	50	2605
Johnson Oil Ref. Co., Flinchin 1, nw se sw 11-19n-9e (otd 2102)	10	2173
Bailey et al, McCracken 1, nw ne nw 19-19n-9e	*	2534
HUGHES COUNTY—		
Magnolia Pet., Diamond 3, ne sw nw 8-6n-8e	2832	4139
Stanolind-Amerada, Rodgers "D" 2, nw se nw 8-6n-8e	2496	4160
Sinclair Prairie, Oliphant 3, sw nw se 1-9n-8e	612	1747
Potco Oil Co., McCaslin 4-A, nw nw nw 12-9n-8e	690	1751
Saco Oil Co., Oliphant 3, sw ne sw 12-9n-8e	720	1798
LINCOLN COUNTY—		
Cozart, Sukowty 1, ne ne nw 14-14n-3e	lcn.	abd.
MARSHALL COUNTY—		
Priest, Cope-Sublett 6, cwl se ne 1-8s-5e	16	558
NOBLE COUNTY—		
Stanolind et al, Voss "C" 9, ne sw se 28-22n-2w (pb 4821)	794	4845
OKLAHOMA COUNTY—		
Larkin & Warr, Bath-Orchard 1, sw sw se 26-12n-3w	lcn.	abd.
Mid-Continent, Dahl 1, ne ne nw 8-13n-3w	*	7033
OSAGE COUNTY—		
Central Pet. & Nadel, 22, se nw se 16-22n-9e (pb 2190)	1	2403
Peters & Norbla et al 1, nw nw se 27-23n-9e (pb 2561)	*	2661
Lewis Prod, 12, sw sw nw 21-24n-7e	887	2687
Schonfield et al, 3, sw se nw 22-24n-8e	75	2409
Carter et al, 10, csl se¼ 3-25n-6e	¶6-4056	2896
Carter Oil et al, 5, ne se ne 9-25n-6e	¶4¾-3600	2774
Carter Oil et al, Williams 7, nw sw nw 35-26n-6e	¶1-1169	2919
PONTOTOC COUNTY—		
Magnolia Pet., Morris 1, se se ne 26-2n-6e (pb 4411)	24	4424
Clark & Cowden, Summers 4, nw ne sw 17-2n-7e	55	1722
Carter Oil et al, Williams 7, nw sw 2n-7e (otd 4151)	1439	4338
Smith 4, nw ne sw 28-2n-7e	¶1½-3188	4290
Fleeborn & Simpson, Woolley 2, ne nw se 28-2n-7e	¶1¾-4619	4275
Skelly, Park College 4, nw sw ne 28-2n-7e	¶1¼-4989	4288
Moore, Schauers 2, sw sw nw 29-2n-7e (otd 4248)	297	4395
Schauers 9, ne se nw 29-2n-7e	¶3-3298	4384
Wordroof 7, sw ne se 29-2n-7e (otd 4095)	¶2¾-3885	4320
Carter Oil, Hardin 7, sw se sw 30-2n-7e (otd 4095)	2710	4340
Moore et al, Benton 6, sw ne nw 32-2n-7e	¶8½-5856	4370
Delaney et al, Hillsdale 1, se se ne 35-4n-6e	*	2045
Radial Oil Co., Simpson 3, nw sw ne 20-4n-8e	*	1536
POTTAWATOMIE COUNTY—		
Arrow, Greenlee 2, se se se 26-6n-4e	120	2894
McIntire et al, Merrill 1, nw ne ne 31-7n-4e	*	4510
SEMINOLE COUNTY—		
Sinclair Prairie, Harjo 1, sw nw se 12-5n-7e (otd 2985)	640	4351
Darby Pet., Harjo 9, cnw se 23-9n-6e	lcn.	abd.
Olsen et al, Oliver 1, sw nw sw 28-9n-6e	648	4152
McMichael, Miller 1, sw sw nw 24-10n-5e	lcn.	abd.

*Failures; †Junked; ‡Million cu. ft. gas.

Mansion Boosted

NEW COMPLETION ADDS TO AREA'S POTENTIAL

Oklahoma City.—British American Oil Producing Company gave its potential in the "Mansion Area" or north Oklahoma City Extension a material boost during the week with the completion of Kirsh 1, C N½ NE SW SW 23-12n-3w. Top of the Wilcox sand was logged at 6315 feet and the test carried to 6450 feet. On a preliminary test it yielded 2041 barrels in six and one-quarter hours flowing through the drill pipe on gas lift. Later it was reported flowing at the rate of 360 barrels per hour, an increase of about 35 barrels per hour. The same operator had started digging cellar for No. 1, C N½ NE NE SE 22-12n-3w. British American's Piersol 5, NW SW SW 23-12n-3w, was drilling below 5770 feet and its Winders 1, SE SW SW of the same section was below 4350 feet. Phillips Petroleum Company and Black Gold Petroleum Company's Sawyer 1, SE NE NE 22-12n-3w, most northerly test in the extension, had cleaned up a fishing job and was drilling below 5850 feet.

Britton Area

In the Britton area to the northwest of the Oklahoma City pool and on the Nemaha Granite Ridge, Sinclair Prairie Oil Company's Heeney 1, NE NE NW 19-13n-3w, topped Viola lime at 6635 feet, Simpson dense at 6675 feet and was drilling below 6731 feet in lime. The same operator's Stites 1, SE SE SW 8-13n-3w, almost two miles to the northeast, made a 10-minute flow of oil, gas and mud when the crew was bailing at slightly below 4000 feet.

In the Edmond pool, nearby, Pure Oil Company's Berquist 1, SW SW SE 30-14n-3w, was drilling below 4900 feet. The same operator's Malm 5, NW SW SE 30-14n-3w, was the deepest of the five wells now drilling in the pool, when it reached 5845 feet. Pure's Malm 6, SE SW SW 30-14n-3w, was drilling below 4250 feet. In the southern or central part of the pool Marathon Oil Company's Dahl 9, SW NW SE 31-14n-3w, was drilling below 4525 feet and its Dahl 10, NE SE SE 31-14n-3w, was below 4275 feet.

May Drill Cleveland Wildcat

It is rumored Carter Oil Company is contemplating a deep test probably in the SE NE 23-9n-2w, three miles northeast of Norman in central Cleveland County. Carter recently paid $40 to $50 per acre for the E½ SE and E½ SW of Section 14-9n-2w, and N½ SW and E½ SE SW 24-9n-2w. Sinclair Prairie Oil Company recorded a lease on the E½ SE 13-9n-2w. The SE NE 23-9n-2w, upon which it is rumored Carter Oil Company will drill, is under Magnolia Petroleum Company lease which expires within 90 days. Other leases recorded recently in the county include Gulf Oil Corporation (Gypsy division) NE 13-7n-1w; Lots 5 and 6 and the NW 13-7n-1w; NE 11-8n-1e; NE and NW 32-8n-1e; Indian Territory Illuminating Oil Company, SW 9-9n-1e and Lot 7 and the NW SW 24-8n-1w; Mid-Continent Petroleum Corporation, S½ SE 18-9n-1e; and The Texas Company one half interest in the S½ NW 24-6n-1e.

In the Moore area northwest of Norman, Sinclair Prairie Oil Company's Marvel 1, NW SW NE 21-10n-2w, was drilling below 5425 feet and the same operators' Rice 1, NE NE NE 28-10n-2w, was below 3365 feet. The discovery well in the Moore pool, Sinclair Prairie Oil Company et al's Community-Franklin 1, SE NW SE 21-10n-2w, continued to yield approximately 1900 barrels per day of high gravity distillate while flowing at the rate of 25,000,000 cubic feet of gas per day. Phillips Petroleum Company is taking this amount of gas daily and transporting it to the Oklahoma City pool where it is being used primarily for gas lift operations. The well had second Wilcox sand from 7270 to 7291 feet and started yielding at an estimated 250,000,000 cubic feet of gas.

It probably is actually the largest gas well ever completed in the state, its estimated initial capacity having been based on the capacity of seven-inch casing to handle gas at the pressures believed to exist in the formation. A deep test one half-mile to the southwest and another slightly over a mile to the southeast both resulted in dry holes which ran approximately 300 feet lower than the discovery well. Some geologists are of the opinion that the area is shut off from the Oklahoma City pool by a cross fault. Only four and one half miles separate it from the south limit of production in the Oklahoma City pool. The well is regionally very low, having correlated more than 500 feet lower than what is believed to have been the original oil-water contact on the south end of the Oklahoma City structure.

Fitts Extension

HUNTON ZONE ENLARGED BY PROLIFIC PRODUCING WELL

Ada.—Blackstock Oil Company's Daniels 1, SE SE SW 21-2n-7e, two locations north of established production in the eastern part of the Fitts pool of Pontotoc County, flowed 150 barrels per hour through tubing to establish itself as one of the largest Hunton lime wells in the pool. That formation has produced largely gas. The test had been watched with considerable interest since it is in a sector about which some doubt had been expressed.

Activity in the southeastern part of the pool was given a boost during the week when E. H. Moore et al announced five locations, all of which it is reported will be McLish sand tests. There were Patrick 1-A, NW NW NE; Patrick 3-A, SW NW NE; Patrick 4-A, SE NW NE; all in Section 31-2n-7e; Craddock 4-A, SW SW SW 29; and Craddock 8-A, SE SW SW, both in Section 29-2n-7e. Earlier in the week the same operators had announced locations for Schauers 14, NE NW NW; Schauers 15, NW NW NW; Schauers 16, NE NE NW; Harper 7, NW NW NE; and Harper 8, NE NW NE; all in Section 19-2n-7e and all to be drilled to Hunton lime. Magnolia Petroleum Company staked locations for Burris "B" 2, NW NW NE; and Burris "B" 3, NW SW NE; both in Section 28-2n-7e; and Indian States Oil Company had staked location for Byrd 1, NE NE SE 35-2n-6e, in the southwestern part of the pool.

In some unaccountable or unreported manner a gate valve was broken at Burke-Greis Oil Company's Chambers 2, NE NW NW 36-2n-6e, and two men were injured when the well went out of control. This is not a new well but was completed about six months ago and was a routine producer. It was shut in late in the week.

Fitts Outpost Tests

Two and one half miles northwest of Fitts pool, Gypsy Oil Company and Ramsey Petroleum Corporation's Emry 1, SW SW NE 15-2n-6e, topped Sylvan shale at 5848 feet and were drilling below 5912 feet without having reported a showing. This test was first scheduled to go to 4500 feet but when that point was reached it was reported to be still in the Atoka formation. Under the new contract it is destined to stop at 6500 feet.

The discovery well still was the only producer in the new Jesse pool, five and one half miles southeast of the Fitts pool in southeastern Pontotoc County. Continental Oil Company's R. W. Simpson 1, SW SW NE 12-1n-7e, east offset to the discovery well, was drilling below 3135 feet; its James 1, NE NE SW 12-1n-7e, south offset to the discovery well, was drilling below 1895 feet; and The Texas Company's Simpson 1, SE NW SW 12-1n-7e, two locations south and two west of the discovery well, was drilling below 3320 feet, presumably in Wapanucka lime. Carter Oil Company et al's Thomp-

son 1, C SL NE NW 34-2n-9e, on the Centrahoma Dome of western Coal County, was definitely dry and abandoned at 7126 feet, although it is understood that the 8⅝-inch casing is being left in the hole for probable testing of the Viola lime at 5970 feet. With total depth at 6235 feet, 10 feet below top of the Bromide formation of upper Simpson age, the Viola lime showed about 125 feet of oil.

TEXAS OUTPUT
33,183,607 barrels were produced in December

Austin. — A statement released last week by Olin Culberson, director of the Bureau of Oil Accounting for the Texas Railroad Commission, shows that December production totaled 33,183,607 barrels, which was an average of 1,070,439 barrels per day.

While this calculation carries no estimate of excess production which may have been run from East Texas or other fields, it is the most accurate figure of Texas production that is available.

The total allowable for the month was 33,874,187 barrels, 1,092,715 barrels per day. An increase of 646 producing wells was reported, of which 513 were flowing wells. This brought the total for the state to 59,461 on December 31.

The total storage for the state increased 124,187 barrels during the month to 3,816,609 barrels. Movements to pipe lines amounted to 32,652,081 barrels. There were tank car movements of 90,683 barrels; trucks moved 96,099 barrels; and 57,741 barrels were moved by miscellaneous means. This brought the total movement to 32,896,604 barrels for the month, a daily average of 1,061,181 barrels per day.

Further details are set out in the attached table.

Tulsa.—A special program is being arranged by the International Petroleum Exposition for visitors and official delegates from nations outside the United States.

These visitors, who usually come from 15 to 25 countries, will be the guests of the International Petroleum Exposition and Rotary International Club on special tours to several oil fields.

The Fitts pool and the Glenn pool districts will furnish two opposite examples of American fields; Fitts as an example of difficult, deep drilling and a new field and Glenn pool as an example of shallow drilling and settled production. The tours will also include the Oklahoma City field. Those especially interested in geological formations will be taken on a tour to the Arbuckle mountains in Oklahoma where all the formations in both the Seminole and Oklahoma City fields come to the surface.

BIGGER DIVIDEND

New York. — Socony-Vacuum Oil Company has increased its semi-annual dividend to 20 cents a share on the common stock, the new dividend to be paid March 16 to stock of record February 19. In 1935 the company paid dividends of 15 cents a share in March and September. In 1934 it paid four quarterly dividends of 15 cents a share.

Deepen Deepest Hole

RECORD CLARK COUNTY TEST IS 6906 FEET DEEP

WEEKLY STAFF REPORT

Wichita.—Establishment of a new drilling depth record for Kansas was a certainty with the announcement that a test in Clark County would be deepened from 6906 feet, at which depth it had been abandoned several years ago. Other features of the week were new pools in Barton and Russell Counties and the probable extension of the Yoder in eastern Reno County and the Stumps pool of northwestern Rice County. Activity during the week was fairly steady despite the handicap of extremely cold weather and impassable roads in many sectors.

Rice County led in new work with six first reports; Reno County had four; Barton and Sumner, three each; Rush, Greenwood, Russell and McPherson, two each; and Haskell, Elk, Woodson, Trego, Cowley, Ellsworth and Sedgwick, one each; a total of 31 first reports for the week. Of the 22 completions, 13 were oil wells with combined initial rating of 11,034 barrels, two were gas wells with total initial volume of 17,250,000 cubic feet, five were dry holes and two were abandoned locations. Total footage in completed wells amounted to 54,377 feet of which 856 feet was in one old well and 10,630 feet in four wildcats. One wildcat test which previously had been abandoned at 4496 feet was deepened to 4588 feet and abandoned so only the difference between these two figures was considered in the footage calculations.

Kansas Deepest to Be Deepened

Olson Drilling Company and Watchorn Oil & Gas Company have announced intention to deepen Morrison 2, C NW NE 20-32s-21w, an eastern Clark County wildcat which set a depth record in March, 1931, when it was abandoned at 6906 feet, presumably in Arbuckle lime. This test was spudded on May 22, 1929, and was drilled to 1100 feet with cable tools and from that point to the state record with rotary tools. The hole from the surface to 600 feet was 24 inches in diameter, in which 20-inch casing was set; from 600 to 5340 feet, 12-inch hole in which nine-inch casing was set; 5340 to 6471 feet, 7⅞-inch hole, in which 6⅝-inch casing was set; 6471 to 6620 feet, 5¾-inch hole in which 4¾-inch casing was set; and 6620 to 6906 feet, 3⅞-inch hole in which no casing was set. Top of the Viola lime was at 6530 feet; Wilcox sand at 6698 feet; and Arbuckle (siliceous) at 6863 feet.

The same operators recently abandoned Stevens 1, a half-mile to the east, after drilling to 6801 feet in dry Wilcox sand. The reason for going deeper in the old hole probably is that the operators are not certain they were in true Arbuckle lime. A conglomerate sometimes found as high as 100 feet above the true Arbuckle is confusing since it is composed largely of siliceous lime which may have been eroded from the old Arbuckle surface.

Northern Rooks County

F. A. Gillespie et al's Lowe 1, NE NE NW 12-6s-18w, northern Rooks County discovery well and most northerly discovery in the state, was acidized with 4000 gallons and when a test was made operators found that the casing seat had been eaten out, permitting water to enter the hole. On a previous test it yielded 60 barrels of 40-gravity oil on the pump from Oswald lime topped at 3036 feet and penetrated to 3161 feet, the total depth. It is on a core-drilled structure.

Eberhardt Pool

The Texas Company's Dena Ziegenbusch 1, NE NE NE 23-19s-11w, south offset to the discovery and only well in the Eberhardt pool of southeastern Barton County, was shut down at 3197 feet after getting about 2,000,000 cubic feet of gas from Kansas City lime. The discovery well, Downing et al's Eberhardt 1, SE SE SE 14-19s-11w, was completed in June, 1935, yielding initially 162 barrels after acid treatment in Arbuckle lime at 3311 to 3360 feet.

New Well Hilger Pool

Stanolind Oil & Gas Company's Peter M. Hilger 2, NW NE NW 16-26s-4w, in the northern part of the Hilger pool in southeastern Reno County, gauged 658 barrels of oil in 15 hours from Viola lime at 4057 feet. Production after acid treatment was 1052 barrels in 24 hours, making it one of the largest wells in the pool. It is a south offset to Magnolia Petroleum Company's Rodgers 1, SW SE SW 9-26s-4w, which topped Viola lime at 4040 feet and yielded 948 barrels initially from 4042 feet, the total depth. It is the sixth well in the pool which was discovered by Stanolind Oil & Gas Company and Amerada Petroleum Corporation in April, 1934. Five of the wells produce from Viola lime and one from Arbuckle lime.

Three quarters of a mile northeast of production in the Hilger pool, Springrose Drilling Company and Foraker's Brauer 1, SW SW SE 4-26s-4w, filled up 1200 feet with oil from Viola lime at 4106 to 4112 feet. It was drilled one foot deeper but

plugged back to shut off a trace of water. It is awaiting acid reaction and appears to be an important extension, although apparently being near the north edge of the accumulation.

Barton Wildcat Gets Production

Yarnell, Carlson & Spencer appeared to have given Barton County a new pool in Bloomer 1, NE NE NW 36-17s-11w, three miles east of the town of Claflin in the northeastern part of the county. Top of the Kansas City lime was at 2994 feet but this formation did not show and casing was run to 3080 feet. Drilled to 3273 feet in Arbuckle lime the hole filled 1000 feet. Nearest production is in the Stumps pool three miles to the southeast and over the line in Rice County.

Yoder Wildcat Being Cased

Marathon Oil Company's Bontrager 1, NE NE NE 33-24s-5w, a half-mile east of the discovery well in the Yoder pool of eastern Reno County, had recovered lost tools and was running casing to 3621 feet. The Yoder pool produces from Mississippi chat at 3402 to 3501 feet. Bontrager 1 will be carried on to test the lower horizons since it is already below the Mississippi lime.

On the south end of production in the Burrton pool of eastern Reno County, McPherson Drilling Company's Scheuchzer 1, NE SE SW 17-24s-4w, was running tubing to test after having a hole full of oil at 3391 feet from Mississippi chat. It made several small flows through the casing.

Sperling Pool

Sunray Oil Company's Dierks 1, C SE SW 14-22s-2w, in the Sperling pool of northwestern Harvey County, was drilling below 2775 feet and expecting top of the Mississippi chat within 200 feet. This pool, discovered in Hunton lime by Imo Oil & Gas Company in February, 1934, has three producing horizons, the Hunton lime, Mississippi chat, and Wilcox sand. The Hunton lime discovery yielded 1625 barrels of oil and one percent water initially after being acidized; the Mississippi chat, 13,000,000 cubic feet of gas after finding a hole full of water in Arbuckle lime at 3274 to 3285 feet and being plugged back to 3142 feet, 187 feet below top of the chat; and the Wilcox sand discovery, 82 barrels on the swab after being shot with 20 quarts and 70 quarts. Sunray Oil Company was discoverer of the latter horizon in Sperling 1, NE SE NE 23-22s-2w, finding the pay from 3447 to 3463 feet.

New Russell County Pool

Russell County had its 28th pool on production early in the week when R. C. Tarrant's Williamson 1, SE SE NW 9-14s-14w, a wildcat test 2½ miles south of Russell and approximately the same distance from the Russell pool, pumped 243 barrels in 24 hours from Tarkio lime at 2522 to 2550 feet, the total depth. Tarkio lime, in the Wabaunsee formation of upper Pennsylvanian age, has yielded showings of oil elsewhere but the Williamson well is thought to be the first commercial producer from it. The well is the first Kansas venture of Tarrant whose home is in Cutbank, Montana, and whose operations have been confined largely to the Rocky Mountain area. Location was made more than a year ago and the test drilled to 875 feet in 1935.

Two and one half miles northeast of Russell, Hartman & Blair staked location for Theodore Johnson 1, NW NW NW 11-13s-14w. It is 1½ miles northwest of the same operators' Hill 1, SW SW NE 14-13s-14w, a dry hole completed in August, 1934, at 3337 feet, and the same distance northeast of the discovery well in the Russell pool. The only other test in the northeastern part of the township was Prairie Oil & Gas Company's Hill 1, NW NW NE 13-13s-14w, completed as a dry hole at 3861 feet in December, 1924.

North of Dillner Pool

Hartman & Blair have staked location for Cook 2, SE SE NE 26-13s-15w, a half-mile north of production in the Dillner pool in the western part of the county. It is a half mile south of Cook 1 which had a good showing of oil in Arbuckle lime but was abandoned due to mechanical difficulties.

The Texas Company's Johnson 1, SE NE NE 2-14s-15w, in the Sullivan pool of southwestern Russell County, topped Gorham sand at 3310 feet, drilled to 3313½ feet and pumped 394 barrels natural on its potential gauge. The Sullivan pool was discovered by Hartman & Blair at Sullivan 1, NE NE SE 2-14s-15w, which yielded 220 barrels initially from Oswald lime at 3060 to 3068 feet, the total depth, on February 22, 1935. Since that date production has been discovered in the Gorham sand and Topeka lime, giving the pool three producing horizons.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
BARTON COUNTY—		
Mid-Continent, Schmidt 1, se se sw 36-19s-11w	1676	3286
BUTLER COUNTY—		
El Dorado Ref. Co., Moore 1, nw se se 11-25s-3e	10	2724
ELLIS COUNTY—		
Mutual Oil Co., Johnson 1, nw sw ne 9-13s-19w	lcn.	abd.
GREENWOOD COUNTY—		
Aikman & Young, Holderman 1-A, nw ne sw 15-22s-12e	25	1715
Anderson & McGinniss, Jensen 1, se se sw 30-23s-12e	*	1890
HASKELL COUNTY—		
Helmerich & Payne, Elliott 1, csw ¼ 30-29s-33w	¶2½	2747
KINGMAN COUNTY—		
Lauck, Skilling 1, ce¼ e½ sw 33-27s-8w (otd 4496)	*	4588
McPHERSON COUNTY—		
Continental, Jones 1, se se se 31-21s-1w (pb 3308)	162	3345
PRATT COUNTY—		
Skelly et al, Gilchrist 1, cse ¼ 7-28s-11w (pb 4245)	¶143¼	4435
RENO COUNTY—		
Dickey & I.T.I.O., Baughman 5, nw sw ne 3-24s-4w	433	3370
Gypsy Oil, Myers 5, sw se nw 3-24s-4w	1349	3606
Sinclair Prairie, Matlock 2, ne ne sw 3-24s-4w	493	3358
RICE COUNTY—		
Franco-Central Pet. Co., Shonyo 1, sw sw ne 11-18s-10w	*	3356
Gypsy Oil, Steckel 5, cw½ sw nw 31-19s-10w	1464	3301
RUSSELL COUNTY—		
Smoky Hill Oil Co., Miller 3, ne nw ne 31-14s-13w	1200	2897
Texas Co., Johnson 3, se se ne 2-14s-15w	394	3314
Hartman & Blair Sellens 2, ne ne nw 26-15s-13w	348	3306
Skelly, Karst 1, se ne nw 27-15s-14w	*	3372
SEDGWICK COUNTY—		
Collins et al, Skinner 1, se se se 4-27s-1e	*	522
SUMNER COUNTY—		
Sam Jarvis, Wartick 1, sw sw se 11-32s-2e	lcn.	abd.
Ramsey Pet. Co., Town Lot 1, ne nw ne 14-32s-2e (otd 2116)	1312	2972
Lario & Barnsdall, Weinrich 13-A, nw se nw 23-32s-2e	2168	2885

*Failures; †Junked; ¶Million cu. ft. gas.

Near Waldren

Marathon Oil Company found top of the Mississippi lime at 4216 feet and was drilling below 4350 feet in Zellers 1, C SW NW 17-35s-8w, 14 miles southwest of Anthony in southwestern Harper County. Nearest oil production is in the Wheland pool 29 miles to the northwest in Barber County. It is 31 miles west of the Caldwell pool. The test was drilled to 3940 feet where it had a fishing job early in January this year and operators had to recement surface pipe at 382 feet.

McPherson Area

Sunray Oil Company's Anderson 1, SW SW SW 29-18s-2w, in the Anderson or McPherson pool of northeastern McPherson County, was drilling below 1135 feet and had picked up no markers. It is a half-mile south of the same operator's Peterson 1, SW SW NW 29-18s-2w, a dry hole in the Mississippi chat completed at 2985 feet in December, 1935. It is, however, just two locations north of McPherson Oil & Gas Development Company's Chindberg 2-K, SW NW NW 32-18s-2w, completed for 245 barrels initially from Kansas City lime at 2308 to 2327 feet early in January of this year.

Rice Wildcat Acidizing

Permian Oil Company's (Detrick et al) Conner 1, C NE NE 28-19s-7w, five miles east and one north of Lyons in eastern Rice County, was being prepared for acid after being plugged back from 3640 to 3210 feet. This test topped Mississippi chat at 3240 feet, Misener sand at 3470 feet, and had a hole full of water from 3470 to 3475 feet. Eight-inch casing was set near top of the Viola lime at 3485 feet. Water was found in both the Wilcox and Arbuckle lime, the latter topped at 3630 feet. Six-inch casing had been cemented at 3185 feet, 295 feet below top of the Kansas City lime.

Skiles et al's Edwards 1, NW NW NE 3-18s-8w, 2½ miles east of the town of Geneseo and five miles northeast of production in the Geneseo pool, pumped 550 barrels natural in 20 hours and was showing no water after being deepened from 3281 to 3282½ feet. It is a new pool producing from the Arbuckle lime topped at 3277 feet.

Allison & Fitzwilliams' Blake 1, NE NW NW 9-18s-10w, in the Stumps area of northwestern Rice County, topped Arbuckle lime at 3257 feet, drilled to 3259 feet and set 6⅝-inch casing on bottom. The hole was bailed down before drilling the plugs and a good showing of oil encountered. It was believed that the cement job on the 6⅝-inch had failed and that the showing was coming from Kansas City lime. The discovery well in the Stumps pool produced from Arbuckle lime.

Northwestern Stafford County

Herndon Drilling Company and Atlantic Oil Producing Company had recemented casing at 3788 feet in Russell 1, C SE NW 20-21s-14w, wildcat test in northwestern Stafford County. Top of the Arbuckle lime was encountered at 3770 feet and the five-inch casing underreamed and cemented at 3778 feet. Bailing down before drilling the plugs operators found water in the casing. A small showing of

oil was encountered in Viola lime topped at 3670 feet. It is being drilled on a seismograph structure.

Empire Oil & Refining Company's Bennett 1, NE NE SW 23-24s-13w, south offset to the discovery well in the St. John pool of central Stafford County, topped Kansas City lime at 3535 feet, had a showing of oil in samples from 3555 to 3560 feet and cored from 3560 to 3566 feet with no recovery. Eight-inch casing was run to 3550 feet, 16 feet from bottom.

Central Norton County

H. V. Elwell and Lario Oil & Gas Company were cleaning out on bottom at 3005 feet in Kennedy 1, SW SW NW 22-3s-23w, four miles south and slightly west of Norton in northern Norton County. Ten-inch casing had been underreamed to 2740 feet. It is the most northerly drilling well in the state, being only 16 miles south of the Kansas-Nebraska line.

281 TEXAS PERMITS

Austin.—The Texas Railroad Commission approved last week permits for the drilling of 281 new wells in Texas. This was 107 more than were allowed the week before and the highest number issued any one week of the new year.

Increased activity in the Southwest Texas district was largely accountable for the change. There were 90 permits in this district, which included 45 in Duval County, 13 in Webb County and 10 in Nueces County. The Gulf Coast district listed only 34 new locations.

West Texas listed 33 new locations, which was a decided increase for that area, and there were 14 reported from the Panhandle.

The commission signed permits for 69 wells in East Texas where few locations have been made in the last few weeks. This included 41 in Rusk County, 27 in Gregg, and one in Smith County.

The North Texas district turned in 17 locations, and there were 12 in East Central Texas, and the same number in the West Central Texas district.

OIL PROBE

Houston.—Representative Augustine Celaya, chairman of the hot oil investigating committee of the Texas House of Representatives, came to Houston last Friday to make preliminary plans for instituting a search for probable illegal oil shipments from this and other Coastal ports in the state.

Celaya declared that the number of tanks leaving Houston is larger than formerly, and he desired to know if this was legal oil. He hopes to ascertain the source of current pipe line runs from system leading to the Gulf.

HOUSTON A. P. I.

Houston.—On the evening of Monday, February 10, the members of the Houston Chapter, Production Division of the American Petroleum Institute will hold their regular meeting at 7:30 P. M. in the auditorium of the Houston Chamber of Commerce.

Some interesting papers and discussions on "Drilling Foundations" are promised.

Wildcat Pumps

ORDOVICIAN WELL MAKES 105 BARRELS ON INITIAL GAUGE

NORTH & WEST TEXAS

WEEKLY STAFF REPORT

San Angelo.—Initial pumping gauge given Gulf Oil Corporation's W. N. Waddell et al 1, first producer in the Ordovician lime outside the Big Lake field in West Texas, amounted to 73 barrels of oil in 12 hours. It is producing from about 80 feet of sand section, comprising the upper portion of the Simpson that was topped at 5980 feet, and is the deepest pumper in Texas, except for Gulf Coast areas. Waddell et al 1 is situated on the northwest nose of the Sand Hills structure, western Crane County. The hole was plugged back from sulphur water in Ellenberger limestone at 6316-6450 feet to about 6300 feet, excluding all water. Shot of 440 quarts of nitro in lime at 6186-6300 feet failed to improve the oil yield, but a second shot of 140 quarts in sand at 5979-6050 feet was beneficial.

Location for another Ordovician lime test on the Sand Hills structure is expected to be announced shortly by Gulf Oil Corporation. It is the largest lease owner in the area, and will drill to perpetuate short term leases on one or more of its separate leaseholds.

The well pumped 105 barrels of 34.7 gravity oil during the first 24 hours, including a small flow due to agitation, and is expected to make a larger producer than the initial indicates after pumping equipment is properly adjusted.

In view of the thickness of the pay zone logged by Waddell et al 1 geologists forecast more productive wells from tests to be drilled on top of the structure. Proof of this theory will be tested by Humble Oil & Refining Company's J. B. Tubb 1, near C NW NW Section 11, located about 3¾ miles southeast of the deep pumper, as it has progressed to 2403 feet with the Ordovician as its projected goal. Sinclair Prairie Oil Company et al's Tubb 1, an intermediate test tentatively slated to try for production in the Permian lime at 4200 feet, has been delayed by a fishing job at 2641 feet.

An indefinite shutdown is in store for Loffland Brothers, John I. Moore et al's L. S. McDowell 1, proposed Ordovician lime test for Glasscock County, as result of having depleted funds raised by unit members in deepening the hole from 10,115 feet to 10,521 feet. Loffland Broth-

WEST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
CRANE COUNTY (McCamey Field)—		
Conoco & F. P. Zoch, Cowden 3-B..	441	2452
ECTOR COUNTY (North Cowden Field) —		
Empire G&F Co., A. W. Wight 3..	654	4279
Simms Oil Co.-Atlantic O. P. Co., TP Land Trust 1.....	390	4235
HOWARD COUNTY—		
Iron Mountain Oil Co., C. D. Reed 3	725	2766
C. D. Reed 9.....	778	2766
O. M. Murray, Wirt Davis & Fred Florence, Davis 6.....	752	2804
Shasta Oil Co., G. M. Dodge 5.....	736	2775
JONES COUNTY—		
I. N. DeMont et al, L. G. Roberts 1	*	2015
LOVING COUNTY (Wheat Field)—		
Sinclair Prairie, McGinley 2.....	228	4319
MITCHELL COUNTY—		
H. L. Lockhart et al, W. C. Berry 1	*	1802
PECOS COUNTY (Yates Field)—		
Marathon, I. G. Yates 45-A.....58,824		1370
I. G. Yates 31-B.....10,176		1214
REAGAN COUNTY (Big Lake Field)—		
Big Lake Oil Co., University 182...	56	2950
REAGAN COUNTY (Grayson Pool)—		
Skelly Oil Co.-Utah Southern, University-Grayson 6.....	15	3079
UPTON COUNTY—		
Shell, Cordova Union 2-A.....	668	2277
WARD COUNTY—		
California Co., A. B. Gordon 16.....	156	2525
Lindsay Drl. Co. & Bolin, Hardage-Wilson 1	106	2539
C. Wallis 3.....	275	2564
Wahlenmaier Pet. Corp., R. O. Potts 1	351	2316
WINKLER COUNTY (Halley Field)—		
Skelly Oil Co., Halley 6.....	404	2925
WINKLER COUNTY (Kermit Field)—		
Humble, J. B. Walton 5-B.....	163	3070
Joe C. Maxwell et al, J. B. Walton 1	61	3218
Stanolind-Westbrook-Thompson, Hutchins 5-T-90	42	3105
WINKLER COUNTY (Sayre Field)—		
Sayre Oil Co., J. F. Howe 4-A, ¶4	1184	2955

*Failures; †Junked; ¶Million cu. ft. gas.

TEXAS PANHANDLE

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
CARSON COUNTY—		
Magnolia, fee (No. 244) 15.....	473	3022
GRAY COUNTY—		
Danciger Oil & Refineries, Inc., Morse 9	286	2598
Empire G&F Co., I. B. Hughey 2-B	490	3285
King Royalty Co., J. C. Vallmert 5-S	369	3260
Magnolia, fee (No. 227) 15.....	62	3011
Shell, J. S. Morse 1-A.....	240	2641
Stanolind, A. J. Culler 4.....	505	3290
HUTCHINSON COUNTY—		
Stanolind, E. E. Watkins 7.....	478	3000
MOORE COUNTY—		
Anderson-Kerr Pet. Co., T. H. Flynn-Gulf 1	¶14	3320
J. C. Wilson-Gulf 1.....¶33½		3375
Texoma Nat'l Gas Co., W. H. Brown-Gulf 1	*	3670
WHEELER COUNTY—		
Alma Oil Co., J. J. Perkins 2-B.....	134	2537
Cub Oil Co., D. N. Massey 1....	¶26	2165
Reynolds Dev. Co., J. B. Wuester 1	¶29¾	2127
Royal O&G Corp. (was Helena), Keller 24 .....¶13	1327	2537
Skelly Oil Co., D. E. Johnson 11 .....¶7	1932	2523

*Failures; †Junked; ‡Million cu. ft. gas.

ers, contractor and part owner, plan to throw in a few extra hours of drilling, then move their rig to take care of a new contract elsewhere in the Permian Basin. McDowell 1 entered a white lime formation at 10,186 feet and cuttings carried oil stain. Analysis of the recovered cores indicated that the test had not reached the Ordovician series. The well made occasional heads of oil during a long shutdown at 10,115 feet. It was treated with 6000 gallons of acid solution at the latter depth with negative results.

TEXAS HEARING

Austin. — The statewide proration hearing held before the Texas Railroad Commission each month has been scheduled for February 18.

No unusual conditions will be up for discussion at the hearing, save the situation at Yates, which was postponed from January.

NORTH TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls	Depth
ARCHER COUNTY—		
Paul Atchley et al, M. P. Andrews 1, sec 1824	*	978
L. T. Burns et al, J. H. Turbeville 16, blk 152	25	1519
Burns & Long, J. H. Turbeville 13-D, blk 142	5	1329
Fain-McGaha Oil Corp., L. F. Wilson 3-F, lot 21	65	1619
Krahenbuhl & King, J. H. Turbeville 1, blk 49	*	1450
Perkins-Cullum Oil Co., Abercrombie 20, blk 157	11	1014
Falls County 208, blk 33	25	1128
Falls County 209, blk 34	30	1130
Falls County 210, blk 34	25	1125
Falls County 211, blk 34	35	1144
Shappell Oil Co., L. F. Wilson 1, sec 77	*	2262
The Texas Co., J. J. Perkins 1, blk 55	*	1533
BAYLOR COUNTY—		
Consolidated Oil Co., Portwood 16-R, sec 1579	465	1365
Tom F. Hunter et al, Harmel 1, sec 3133	*	1640
Mills 1, sec 2492	*	1619
W. B. Omohundro et al, Mrs. T. W. Parker 1	*	1585
COOKE COUNTY—		
Harrison & Dillard, R. W. Trew 1	350	1154
Jacob-Bell Oil Co., Ben Dudenhaefer 1	*	2277
F. W. Merrick, Inc., G. A. Stelzer 7	5	837
Seitz-Comegys & Seitz, Inc., Trew 2-A	175	1142
JACK COUNTY—		
C. W. Clark et al, F. E. Singleton 1, blk 4	25	759
MONTAGUE COUNTY—		
Bridwell Oil Co., Cunningham 8	47	924
Lesh & McCall, Cunningham 10-B	*	977
WICHITA COUNTY—		
Geo. B. Ray & Staniforth, Robinson 2	40	1924
WILBARGER COUNTY—		
Waggoner Ref Co., Waggoner 3-L, sec 32	61	2394
YOUNG COUNTY—		
Cato Oil Co., Hamilton 8, sec 1393	75	916
Hunt & Thomas, R. E. Myers 5, sec 160	*	1105
L. A. Long et al, E. C. Stovall 4	200	2707
Oil Prod. Corp., E. B. Stewart 1-B, sec 1493	*	940
A. C. Parke et al, S. L. Ellis 1, sec 2244	*	750
W. H. Peckham et al (was J. J. Moran), W. B. Howard 2, sec 3401	*	998
S. B. Spence et al, Larrimore 1, sec 253	*	583
The Texas Co., Finch 10-B, sec 40	55	678
Underwood Drl. Co.-Campbell, Campbell 6-A, sec 1376	225	892
Campbell 7-A, sec 1376	200	896
Wichita Prod. Co., E. C. Keith 10, sec 267	10	715

*Failures; †Junked; ¶Million cu. ft. gas.

LEASING IN GAINES
Geophysics report gives this Permian area boost

Midland, Texas.—Lease trading in Gaines County, which is most likely to be one of the early additions to the list of oil producing counties in the Permian Basin section of West Texas, has shifted to the Cedar Lake area in the northeast portion of the county. Acreage prices have lately jumped from $3 to $10, and above, on the strength of reports that recent geophysical surveys have established a "lime high" of considerable proportions. Activity centers on the east portion of Block H, D. & W. Survey, and due north of a 9000-acre block held under lease by the Rowan-Nichols Oil Company, Fort Worth. An official of the company reports that no immediate development is contemplated.

The Seminole geophysical prospect is the county's contender for discovery honors. W. T. Walsh, Harry Adams et al's Averitt 1, NEc NE NE Section 228, Block G, W. T. Ry. Survey, about 2½ miles northwest of the town, completed its most recent fishing job, and was drilling in anhydrite at 3580 feet late last week. Numerous shows of high pressure gas production immediately above and below the Yates sand, and a trace of oil at 3350-3355 feet, are considered favorable ear marks for production being found in the dolomite lime horizon, the projected goal. Wahlenmaier Petroleum Corporation and York & Harper, Inc.'s E. H. Jones-Humble 1, 16½ miles northwest of Seminole, obtained financial support in deepening to the lime after fulfilling original contract for a 5000-foot test. This wildcat occupies a low structural position for the region.

Consideration of $25 per acre is reported to have been paid by L. H. Wentz for lease on 333 acres in Section 17, Block A-12, P. S. L. Survey, southwestern Gaines County. This purchase is protection against a 4500-foot test scheduled to be drilled by independents in Section 16.

Turman Oil Company has made location for its first test to be drilled on properties acquired recently in the Grand Falls district, Ward County, from Tex-Mex Petroleum Corporation, for a reported consideration of $385,000, including 50 percent cash and the balance payable in notes. The deal involves 480 acres and 12 wells in Sections 16 and 23, Block 5, H&TC Ry. Survey. Overriding royalty interests are outstanding.

Sayre Extended

Production in the Sayre field, Winkler County, was advanced about one half-mile north through Amerada Petroleum Corporation's Daugherty 1-A developing a natural flow of 147 barrels of high gravity oil in four hours from sandy-lime at 2825-30 and 2840-55 feet. The hole is bottomed at a subsea depth of 126 feet, and will be shot with nitro.

This successful completion prepetuates leases on several nearby tracts held by other companies that were confronted with expirations on March 1.

The Texas Company's Daugherty 1, SWc Section 2, Block 74, situated more than one mile west of the Scarborough field, logged free oil in sandy-lime at 3058-78 feet, and was drilling at 3095 feet.

WEST CENTRAL TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls	Depth
BROWN COUNTY—		
Gunn Prod. Co., J. C. Dickens 2-A	10	1451
Geo. E. Poulter et al, Buse 1	*	1315
CALLAHAN COUNTY—		
E. L. Anderson et al, J. M. Radford 1	*	1615
COLEMAN COUNTY—		
R. F. Lyons et al, E. B. Newsom 1	*	1660
COMANCHE COUNTY—		
H. W. Martin et al, W. L. Lusk 1	*	2815
EASTLAND COUNTY—		
Ray F. Hoff et al, J. White 1	50	1457
Hoffman & Page Co., Lula Johnson 1	*	2920
Hickok Prod. & Dev. Co., Cisco fee 1	33	3440
JOHNSON COUNTY—		
W. L. Forbes et al, W. C. Gayle 1	*	762
SHACKELFORD COUNTY—		
Albany Oil Co.-H. Pardue, G. R. Davis 6	200	1603
S. Alexander et al, J. C. Ghio 3	10	597
Brown-Gardner & Terry, W. H. Green 1	*	1250
Dickey Bros., B. S. Walker 7	*	395
Engle Bros.-Swallow, W. D. Reynolds 1	*	1425
Frontier Prod. Co., J. H. Nail 3	35	1365
R. F. Gilman et al, Lula Smith 1	6	931
Humble, T. G. Hendrick 1-D-a	*	1870
I. R. Jones et al, W. J. Dodson 7	5	665
W. T. Jordan et al, L. G. Davis 1	*	1620
Kittery Oil Co., J. W. Erharat 4	20	816
Livingston & Wellman, Morris-Buie 1	15	1595
Morton-Grover & Rose, W. P. Newell 1	¶8¼	1453
Geo. B. Ray & Staniforth, J. P. Vickers 3	15	1615
Roeser-Pendleton, Inc.-Humble, Morris-Buie 1, sec 191	328	1610
Tannehill et al, R. S. Bradford 1	*	825
L. M. York et al, O. W. Reynolds 1	*	617

*Failures; †Junked; ¶Million cu. ft. gas.

EXPECT EXTENSION
Osborn drilling trend to east and south

Pampa, Texas.—Activity in the north portion of the Osborne field, Wheeler County, is spreading to the east and south. Teci Production Company's O. W. Stewart 1, SWc SW NE Section 73, Block 13, H&GN Ry. Survey, is being watched for a half-mile east extension. Gas production was passed up at 2066-2068 feet, and a show of oil was logged at 2112 feet. Drilling was in progress below 2130 feet, according to reports, with oil production due above sea level depth of 2199 feet. L. W. Bevan, Fort Worth, and associates have made location for a test on their L. Gregg 40-acre lease, NEc SW NE Section 72, and have acquired leases on two 80-acre tracts in Sections 68 and 69, situated south and southeast of production.

Ben G. Barnett et al's J. P. Patterson 1-B, SEc E½ SW Section 89, offsetting production on the northwest edge, is cleaning out after 120-quart nitro shot in broken pay at 2094-2125 feet. Bottom hole water was encountered in drilling to 2160 feet, or 21 feet above sea level.

Phillips Petroleum Company's L. M. Hughes 1, Hall County wildcat, was logging white lime formation while drilling below 7570 feet. It is seeking production in the Ordovician lime series after failing to produce from the Canyon lime, the original goal.

Many Lease Deals

PRODUCING PROPERTIES IN EAST TEXAS ARE SOLD

WEEKLY STAFF REPORT

Tyler. — Numerous deals involving producing properties in the East Texas field have been concluded since the first of the year. Majority of the transactions cover small tracts bearing stripper wells, and producers yielding a high percentage of water. Consideration for such properties generally ranges from $15,000 to $30,000 per well. Trading has been restricted to independents, except for two purchases by Atlantic Oil Producing Company.

Independents holding a few non-flowing wells are finding it difficult to show a profit on their operations with their production limited to 20 barrels daily per well. In most instances such leases have over-riding royalty and oil payments outstanding, and the net income is not sufficient to carry the operating expense. Independents more favorably situated in respect to labor costs per well are acquiring such properties in greater numbers as the non-flowing well list grows.

Atlantic Oil Producing Company is credited with having paid $150,000 cash, or at rate of $50,000 per well for A. E. Morgan, J. M. Noble and E. E. Westervelt's Henry L. Foster 9.3-acre lease, Wm. Painter Survey, Gregg County, with three flowing wells. These wells have a rated potential flow of 975 barrels per hour, with a current allowable of about 28 barrels per day each. The same buyer is reported to have acquired one-half interest in Jim O. Whittington et al's Annie Boyd 13.4-acre lease, G. W. Hooper Survey, Gregg County, with five flowing wells for $125,000 cash, or at rate of $50,000 per well. The wells have a proration quota of about 26½ barrels daily each.

G. H. Vaughn Production Company recently sold its H. Sexton 20-acre lease, Daniel Clark Survey, near east edge of production in Rusk County, to Rudco Oil Company for $62,500 cash. There are two completed wells on the property, and permits approved by the commission for two additional tests. L. O. McMillan, Tyler, co-owner with Tip and H. J. DeArman in 21 producers in Rusk County, has purchased the 50 percent interest held by the latter for a reported consideration involving $200,000 cash and a substantial oil payment.

Cash consideration of $15,000 is reported to have been paid by the Sklar Oil Corporation, Longview, for Bay Oil Corporation's W. P. Crews 10-acre lease, J. W. Bradshaw Survey, near west edge of production in Gregg County. The single well on the lease is prorated to 20 barrels daily.

Shell Petroleum Corporation has assigned lease on its Mrs. Aurelia Laird 165-acre lease, P. Walker Survey, located due east of Kilgore, to Max Rubin et al, retaining one-sixteenth over-riding royalty on the seven-eighths production interest. Rubin et al are required to start development work immediately. Shell Petroleum Corporation adopted a policy of farming out its probable marginal leases during the early stages of field development, and by doing so materially reduced its drilling program.

CUT DRILLING PRICES

Tyler.—Drilling contractors in East Texas are in the midst of one of their periodical price cutting sprees since the number of active rigs dropped below 100. A responsible rotary drilling firm has just given competitors a new mark to shoot at by contracting to drill for a major company a group of wells for $4900 each, with the latter furnishing only the oil string, tubing and surface connections. In order to cinch the bid, the contractor guaranteed to have each well on production within 10 days of the spudding date, else indemnify the lease owner in cash for the allowable production lost by delayed completion.

Only a few of the large companies will entertain bids known to be unprofitable for contractors, owing to the possibilities of the drilling crews not being fully protected by insurance and paid the standard wage scale. The hazard of a contractor becoming bankrupt while drilling is also taken into consideration.

CONSOLIDATING LINES

Tyler.—Consolidation of independent crude gathering systems in the East Texas field is rapidly reducing the number of completing units, and is enabling the stronger concerns to increase their share of the current production. Frontenac Pipe Line Company, which supplies crude to a group of refineries in Canada, has strengthened its position as an oil purchaser through the acquisition of Century Pipe Line Company's gathering system in the Joiner area, involving 76 wells with an allowable of about 1500 barrels daily. Prior to this deal Frontenac Pipe Line Company was gathering about 2800 barrels daily from 135 wells. Century Pipe Line Company installed its system early in 1933 to supply crude to the Century Refining Company's plant, which has been inactive for some months.

Solvex Pipe Line Company, crude purchasing unit for Solvex Refining Company's 5000-barrel capacity refinery at Gladewater, has made progress in lining up adequate crude supplies. The company has acquired Roy I. Davis Pipe Line Company's system in northeastern Gregg County, involving 40 well connections with an allowable of about 800 barrels daily, and is at work on 5½ miles of four-inch line to connect same with the recently acquired Southern Oil Pipe Line Company's system. Solvex Pipe Line Company is connecting with 20 wells held by the Peckham Drilling Company. Solvex interests are reported to have purchased the Union Refining Company's 6000-barrel capacity skimming plant at Camp Switch.

Beacon Oil & Refining Company has contracted to deliver its crude runs in the Joiner area to the American-Liberty Pipe Line Company, which is now engaged in building a direct trunk line from the field to tanker loading facilities near Houston. The contract is for three years, according to reports, with the former receiving five cents per barrel for gathering. This deal involves 150 well connections, with an allowable of about 2980 barrels daily.

EIGHT DAILY

Tyler, Texas.—Completions in the East Texas field averaged eight producers daily during the past week. There was also one failure recorded for the period. Independents are the most active, having contributed 32 of the 56 oil producers reported for the week.

New completions included 13 wells that failed to flow, and initial gauges were established by swabbing and pumping. All of these nonflowing wells were drilled on properties near the east flank of the structure in Rusk and Gregg Counties. Magnolia Petroleum Company's Nadine Utzmen 1, located on 87½-acre lease and northeast of Kilgore, encountered poor sand conditions in drilling to 3479 feet, but a small pumper was attained after 20-quart nitro shot at 3464-3472 feet.

Baker and Kosmic Drilling Company's M. Wilson 1, located near west border of production in Smith County, is to be abandoned after repeated efforts to make a commercial producer with the hole bottomed at 3785 feet. Pete Hoffman et al's Stubblefield 1, located in Cherokee County, tested salt water in sand at 3645 feet, and is likewise scheduled to be plugged.

EAST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
JOINER AREA—		
Arkansas F. O. Co., Wheelis 14 (80½-ac)	7000	3683
Baker & Cosmic Drlg. Co., Wilson 1	*	3785
Nick Barbare & Seip, Lambert 7 (33-ac)	65	3570
Bateman O&G Co., Worrell 9 (48.34-ac)	120	3663
E. Constantin, Jr., et al, Cary 1, (11.07-ac)	360	3574

Company, Well and Location	Init. Prod. Bbls.	Depth
Thompson-Pollard 1 (7.38-ac)....	750	3562
Cook Dr. Co., Alford 1-F (85/100-ac)	360	3620
W. R. Dearing-Royal Pet. Corp., Herring 1 (5.58-ac)	75	3650
Herring 2 (5.58-ac)	90	3671
Genro Drl. Co., Bateman & Pace 2 (38-ac) 1500		3744
W. B. Hamilton et al, Gambrell 15 (54.7-ac) 3000		3674
Humble, Price 50 (432.05-ac).....8000		3859
Thompson 10 (80.9-ac) 10,000		3690
Hunt Prod. Co., Dickerson 7 (53-ac) 1000		3650
Illinois Oil Co., Mayfield-Shell 33 (197.1-ac) 1500		3789
Mayfield-Shell 34 (197.1-ac) 1000		3787
Magnolia, Wright 34 (78.1-ac) ..10,500		3680
B. F. Phillips-Barbare & Seip, Herring 2 (14½-ac)	90	3598
Sells Petroleum, Inc., St. Clair 6 (84-ac) 3500		3729
Sinclair Prairie, Mayfield 45-A (374.74-ac) 2000		3852
Mayfield 16-B (149-ac) 3500		3625
Sun, Burns 4 (109.98-ac)	750	3747
Schuyler 7-B (74.78-ac) 1000		3691
Texas Co., First State Bank (Overton) 19 (160-ac) 4500		3779
Texas Canadian Oil Corp., Kelly 1-A (20.42-ac)	500	3675
Pace 3 (35-ac) 2500		3816
Pace 5 (35-ac) 6000		3777
Trico Oil Co., Deason 2 (5-ac) ...	500	3681
Vindicator Pet. Corp., Worrell 1...	75	3642
J. R. Wright-Pet. Markt. Corp., Lewis-Marathon 1 (43.53-ac).....	240	3670
KILGORE AREA—		
Arkansas F. O. Co., Hughey-Ross 30 (220-ac) 6000		3576
Gulf, Oten 7 (48½-ac).....	100	3666
Hurtle Oil Co., Sexton 9-A (55.26-ac)	750	3660
Sexton 10-A (55.26-ac)	75	3657
Magnolia, Nadine Utzman 1 (87½-ac)	200	3479
C. L. McMahon et al, Laird 11 (45.1-ac) 6000		3628
M. W. McVey et al, Richards-Shell 5 (145-ac)	90	3515
Geo. Prendergast & Roger Lacy, Beall 6 (11.9-ac) 10,000		3642
Sinclair Prairie, Andrews 27 (200-ac) 7000		3490
King 45-A (290-ac) 8500		3510
King 48-A (290-ac) 9000		3510
King 13-B, Tr. 2 (111.8-ac).....6500		3485
King 18-B, Tr. 5 (147-ac) 6500		3471
LONGVIEW AREA—		
Amerada, Burnsides 14 (100-ac)...7000		3562
Arkansas F. O. Co., Lathrop 8-B (58.82-ac) 8500		3607
Lee 6-A (52.1-ac) 8500		3588
McKinley 7-C (54.47-ac) 8000		3626
Dunham et al, Jeter 2, blk 58 (3-ac) 2500		3591
East Texas Pet. Co., Fleet 11 (112-ac) 1500		3607
Bert Fields et al, Walker 4 (140-ac) 1000		3708
Jones-Shelburne, Inc., Victory 3 (35.6-ac)	500	3706
Margay Oil Corp., Victory 10 (87-ac) 4000		3672
Shell, Fishburn 16 (100-ac) 8400		3512
Simms Oil Co.-Leon Russ, Flewellen 16 (200-ac) 3000		3667
Stanolind-Simms, Akin 13 (80-ac)..9000		3625
Superior Oil Co., Ingram 19 (163-ac) 10,500		3563
Tide Water, Lake Devernia 37 (270.85-ac) 9500		3537
ANDERSON COUNTY (Camp Hill Field)—		
Sun Oil Co., Carl Rosson 1.....1000		5073
ANDERSON COUNTY (Long Lake Field)—		
Tide Water & Seaboard Oil Corp., Shaw-Cern 4 2500		5347
LIMESTONE COUNTY—		
David J. Crawford et al, Mary Ward 1 (28-ac)	5	3001
Mary Ward 2 (28-ac).....	*	2997
VAN ZANDT COUNTY (Van Field)—		
Pure Oil Co., B. W. Russell 8 (30-ac)	20	2969
FANNIN COUNTY—		
Warner Moore, Wilson & Smith, Hancock 1	*	789
NAVARRO COUNTY—		
Peyton Bros. et al, J. F. Rushing 1	*	3060

*Failures; †Junked; ¶Million cu. ft. gas.

Important Strikes

SAN PATRICIO, WEBB AND DUVAL GET NEW FIELDS AND EXTENSION

SOUTH TEXAS

WEEKLY STAFF REPORT

San Antonio.—Outstanding among South Texas developments of the past week were the discovery of several new producing fields and the addition of important extensions to existing production. The Mirando district was especially attractive with a new field found two miles south of the Cole pool in Webb County and another proved four miles south of the Seven Sisters field in Duval County. Indications were that an important deep sand extension would be found to the Carolina-Texas field of Webb County.

The Corpus Christi area was also in the limelight, the Saxet Heights and Saxet fields both receiving extensions, with the latter getting a new producing horizon along with the extension completion. The new Taft field, San Patricio County, where two failures have been completed may yet get its second well, a test appearing favorable for production.

MIRANDO STRIKES

Duval and Webb get new producing areas

Laredo.—Mirando District's continued development campaign is rewarding additional new producing areas, the week bringing the definite opening of another Duval field, establishment of a new gas area in southern Webb County and possible extension to the important deep sand in the Carolina-Texas field of Webb County.

Holland S. Reavis' C. H. Webster 1, located one mile east of the Carolina-Texas field deep production, was being tested in the 5000-foot Mount Selman sand late in the week. The well carried oil odor in sand at 5023-36 feet but developed 950 feet of salt water on seven-minute drill stem test. It is being carried deeper. The test is in Section 684.

The sand was topped at 5023 feet and was cored to 5036 feet, the whole section carrying an oil odor.

Carolina-Texas Oil & Gas Trust's Benavides 11, ne Section 683, one mile west of the above test, was completed last year at 4996 feet, where it made a large gasser spraying a little 42.5 gravity oil. It topped the gas sand at 4032 feet, and had shale and sand breaks to the total depth, casing being set at 4974 feet to cut off the upper pressure. In an effort to boost the oil flow, the well was deepened to 5056 feet, the result being 40 million cubic feet of wet gas under a working pressure of 1500 pounds on tubing and casing pressure of 1700 pounds, the flow being through ¼-inch choke.

Webb County definitely established a new producing spot in the sector two miles south of the Cole field, and within 1½ miles of the Duval County line. It was O. W. Killam's A. M. Bruni 45, in the northwestern portion of Section 453, which showed for a gasser in the Cole sand at 1812 feet. The well is a south offset to Bruni 44, Section 586, which was completed several days prior at 1801-12 feet flowing 20,000,000 cubic feet of gas. This production is about 2¼ miles south of the 2800-foot sand of the Mirando series being developed mainly by the Magnolia Petroleum Company.

New Duval Field

Duval County's new field contribution was Santa Clara Oil Company's (Atkins and O'Neil) J. F. Welder 1-A, located six miles northeast of Freer and four miles south of the Seven Sisters field. The well is in the Loma Novia sand at 2914-21½ feet, last several inches being shale, and casing is set at 2911 feet. The well was swabbed for 4½ hours, recovering about 20 barrels of pipe line oil per hour. The fluid level remained at just about 2000 feet, several times heading to near the top of the hole, but would not flow. Pumping equipment is to be installed.

The well is located in the central portion of Section 103 and is offset by lease holdings of Atlantic Oil Producing Company and Shell Petroleum Corporation.

This producer was discovered several weeks ago, but was slow in completion due to inclement weather conditions.

Hoffman field, Duval County, experienced a bit of hard luck in that Rogers and Rogers' Cuellar 1, Section 117, one mile south of Loma Novia sand production, showed considerable water in sand at 2854-71 feet, casing at 2852 feet. It flowed some oil and about the same amount of water, but the flow of water is believed to be coming from a bad

cement job on the casing. A squeeze cement job is being attempted to overcome the water situation and a new test is expected shortly. Duval Oil Corporation, Standard Oil Company of Kansas and several others are expected to start their tests in the new producing area within a few days.

Loma Novia field, north of the Hoffman area, continues to be the drilling hot spot. No extensions were reported during the week although a number of inside producers were finished to further increase the potential of that district.

Magnolia Petroleum Company established the third producing horizon in its Piedra Lumbre field just northwest of Government Wells, Duval County, when it completed Duval County Ranch 5, 660 feet out of the southeast corner of Section 100, as a 20,000,000 cubic foot gasser at 1324-31 feet in the Cole sand. The well is the sixth completion in the field and offsets a producer at 1950 feet in the Government Wells sand and another just below 2100 feet in the Loma Novia sand. The heavy supply of gas and excellent pressure paves the way to the repressuring of the two lower sands in the future.

Seven Sisters field's development of two sands via the twin well method undoubtedly will flourish in as much as the first two projects have resulted in successes. The trend of this development already extends more than one mile and further exploration is in prospect.

In the Cole field, southwestern Duval and southeastern Webb Counties, Magnolia Petroleum Company and The Texas Company have added several producers.

Find New Sand

SAXET AND SAXET HEIGHTS RECEIVE EXTENSIONS

Corpus Christi.—A second producing horizon in the Taft field, further extensions to the Saxet Heights and Saxet fields along with a general increase in drilling activity brought Corpus Christi district's interest to a high point. The situation now points to a probable shortage of drilling equipment for 4000 to 6000-foot wells, many contractors already being signed up for the use of their rigs for months.

The bad taste of two failures in the 4900-foot sand offsetting the discovery well in the Taft field, San Patricio County, apparently is being offset by the showing in Humble Oil & Refining Company's J. W. Goodwin 1, which cored sand at 5221-29 feet, 300 feet below the discovery sand which is classified as the Greta horizon. A drill stem test, however, developed 1700 feet of salt water in 10 minutes and the test is drilling ahead.

The well is a direct north offset to George E. Smith's Britton 1, coimpleted recently at 4901 feet as an oil producer. In this level, topped at 4885 feet, the Humble well failed to show enough to indicate commercial production. Likewise, George E. Smith's Britton 2, east offset to the discovery well, showed nothing in the Greta sand and has been shut down at 4932 feet, awaiting the outcome of the Goodwin well. Humble Oil & Refining Company has two more locations in the field to be drilled. Hiram Reed et al's Svedlenak 1, located 1½ miles south of the producer, is being spudded.

The other happening of importance during the week was completion of Texon Royalty Company's G. H. McElroy 2, just south of the Clarkwood townsite in the Saxet area. It flowed at the rate of 20 barrels of pipe line oil per hour through one quarter-inch choke, showing a working pressure of 375 pounds. The well, located one quarter-mile south of production, is the opener of a new oil sand for the field. This sand was logged in several wells in the area, but carried gas, hence no completions were effected at this level.

The Saxet Heights field continues to be extended location by location, all operations being offsets to already proven wells. The continued short extensions, however, place the small tract area within the probable proved field. The result will be a heavy drilling campaign unless some effort is made to unitize the holdings.

Refugio Refining Company's (Garland Clymore), J. Weil 1, one mile southeast of the Saxet Heights field, cored seven feet of sand between 4103-21 feet, recovery being poor, and is going ahead. It showed nothing at this level.

Quintana Petroleum Corporation has its thirtieth large producer in the Tomoconnor field in process of completion. It is Tom O'Connor 31-A, which has sand from 3850-83 and is drilling plugs.

Several failures were recorded in the Plymouth area of San Patricio County. In the extreme southwestern portion of the field. Conroe Drilling Company abandoned Welder 2-G at 6237 feet after an electric formation tester failed to develop sufficient kick to warrant testing. A thin section of sand at 5899-5903 feet showed a little oil and salt water. Plymouth Oil Company completed two wells in the 5600-foot sand. It continues to run five rigs in the field. Sun Oil Company's Edgar 2 has shut down at 6080 feet, failing to find production in the upper sands.

Stanolind Oil & Gas Company abandoned one of the most interesting wildcats drilled in San Patricio County in months. That was Alamo Iron Works 1, lot 17, Patrick Fitzsimmons Survey, three miles southwest of Sinton. It cored a number of sand bodies showing both oil and salt water and was quit at 6676 feet.

Several new producers were added in the 4800-foot sand in the Placedo field, Victoria County, last week. Only one well was drilling ahead to the 6000-foot level, although several are anticipated as a result of the extension of that field several weeks ago.

On the extreme western side of the Corpus Christi district, Houston Oil Company's E. A. Hawkins et al, one half-mile north of the San Diego field, Jim Wells County, cored sand at 3835-36 and sand and shale at 3836-40 feet which showed oil, but developed only mud with a little gas on drill stem test. It is going ahead.

PETTUS IS QUIET

Beeville.—George M. Church's Webb Hearn 1, wildcat in the Beeville area of Bee County, was the most outstanding test in the Pettus area during the week, showing a little oil through perforations at 5900-14 feet in the Conroe sand. The well is bottomed at 5935 feet, with casing set to total depth.

The above test is located about 2000 feet southeast of the same operator's Wood 1, a gasser in the Conroe sand that is showing a slight spray of high gravity oil. The new test is considerably down dip from the first well on the Beeville prospect and may be the key to the establishment of an oil field.

The Pettus district generally is rather dull, although a new field in the North Pettus sector of Goliad County may bring about a slight flurry of activity. Jane Oil Company's (Diamond Half) Gillette 1, located slightly more than one mile southeast of the North Pettus field, is being recompleted after plugging from 3707 feet to 3703 feet. The well previously showed an initial flow of 25 barrels of oil per hour through ¼-inch choke with 140 pounds working pressure, the sand being logged at 3694-3707 feet. Mechanical difficulties made it necessary to rework the well.

Among the other field reports, one active well was reported in the Caesar field, three in the Dirks field and none in the other pools.

Austin.—The Texas Railroad Commission has called a hearing in Austin on February 14, to discuss gas/oil ratios in Southwest Texas.

The commission will take up at that time the ratios for the Old and New Saxet fields, the Corpus Christi, and the Clarkwood fields. It has been suggested that wells in this area should be permitted to produce with gas/oil ratios of 3000/1, which is 1000 feet higher than the ratio usually required for wells in this district.

SOUTH TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls	Depth
BEE COUNTY—		
Cassin et al, J. J. Grisson 1, P. B. McEarly sur (Caesar)	*	lcn.
Illinois Pet. Co., Imogene Hall 7, T. J. Butler sur (Dirks)	600	3925
Simms Oil Co., G. A. Ray 8, W. B. Blanchard sur (W. Tuleta)	*	lcn.
R. B. Swiger et al, E. Gardner 5-C, F. Lewis sur (Caesar)	50	3031
BEXAR COUNTY—		
Eckert & Son, J. J. Brehm 9, P. L. Buquor sur (Eckert)	6	653
J. J. Brehm 10, P. L. Buquor sur (Eckert)	10	643
Richeul Oil Co., C. H. Terrell 7, S. Jett sur (Von Ormy)	4	690
DUVAL COUNTY—		
Atlantic, J. F. Welder 9-A, sec 385 (Seven Sisters)	*	2685
J. F. Welder 10-A, sec 385 (Seven Sisters) pb 2225	250	2525
J. F. Welder 3-C, sec 591 (Seven Sisters)	600	2482

Company, Well and Location	Init. Prod. Bbls.	Depth
Bridwell Oil Co., C. W. Hahl 2, sec 76 (Loma Novia)	500	2600
Blanco & Buchanan, J. F. Welder 9, sec 385 (Seven Sisters)	850	2524
Highland Oil Co., Wm. Hubbard 6, sec 75 (Loma Novia)	550	2574
Humble, R. Serna Jr. 3-B, sec 384 (Seven Sisters)	850	2498
M. Vela 5, sec 42 (Loma Novia)	500	2680
Intrepid Oil Co., Parr Ranch 1, 2590 ft sl, 150 ft el sec 26, wo, did not deepen	*	4856
Magnolia, Brennan Benavides 29, blk 421, Arispe Grant (Cole)	325	2795
Brennan Benavides 31, blk 420, Arispe Grant (Cole)	350	2780
Duval County Ranch 1, sec 573 (Sarnosa)	*	2422
Duval County Ranch 5, sec 100 (Piedra Lumbre)	¶20	1331
Duval County Ranch 6, sec 100 (Piedra Lumbre)	200	1965
C. W. Hahl 19, sec 67 (Loma Novia)	600	2668
Alice Leffler 4, sec 47 (Gov't Wells)	¶7	2279
Montour Prod. Co., Wm. Hubbard 4, sec 75 (Loma Novia)	100	2629
Reynosa Oil Co., McLean 1, sec 62 (Loma Novia)	768	2580
Santa Clara Oil Co. & Henderson, Waelder 5-C, sec 381 (Seven Sisters)	500	2423
Texas, M. W. Brennan 11, blk 491, Hale sub, Arispe Grant (Cole)	100	2841
H. Wendt 18, sec 68 (Loma Novia)	500	2690
HIDALGO COUNTY—		
W. F. Lacy, F. Fairias Heirs 1, tr 255, por 39 (Samfordyce)	*	2860
Weekley Oil Corp., F. B. Guerra 4, tr 12, por 41 (Samfordyce)	400	2801
KARNES COUNTY—		
California & Mills Bennett, J. R. McDougal 1, 250 ft nel, 190 ft sel of Wm. Guthrie sur	*	3760
LIVE OAK COUNTY—		
Luray Oil Co. et al, Little 1, M. M. Shipp sur (McNeill), pb 4995	¶3	5302
NUECES COUNTY—		
Conroe Drlg. Co., J. M. Robinson, blk D, McBride Part Villareal gr (Saxet Heights)	850	4096
Tom Graham, Sam Kahler 1, Villareal sur (Saxet Heights)	700	4062
Houston Oil Co., Rand Morgan 7, sec 7, Range 5 (Saxet)	650	4873
W. W. Walton 5, Villareal sur (Saxet)	450	4852
Southern Minerals, Isensee 4-A, Chas. Land sur (Saxet)	400	4404
Texon Royalty Co., G. H. McElroy 2, T. Gallagher sur (Saxet)	500	4002
SAN PATRICIO COUNTY—		
Conroe Drlg. Co., E. H. Welder 2-G, sec 36, Welder sub (Plymouth)	*	6237
Plymouth Oil, E. H. Welder 25-C, sec 71, Welder sub (Plymouth)	500	5638
E. H. Welder 28-C, sec 49, Welder sub (Plymouth)	450	5625
E. H. Welder 29-C, sec 71, Welder sub (Plymouth)	500	5630
Stanolind O&G Co., Alamo Iron Works 1, 1280 ft nl, 330 ft el, lot 17, P. Fitzsimmons survey	*	6676
STARR COUNTY—		
Phillips Oil Co., Garcia 2, por 100 (Samfordyce)	650	2808
VICTORIA COUNTY—		
E. L. Smith & Gulf, S. E. Wright 2, J. M. Bronson sur No. 8 (Placedo)	250	4792
WEBB COUNTY—		
Mills Bennett, Maria Lopez 2, sec 112 (Lopez)	350	2218
O. W. Killam, Ortiz Ranch 1-A, 2350 ft sw of RG&ER Ry. sur and 255 ft sel of por 17	*	2318
A. M. Bruni 44, 330 ft sl, 7570 ft el sec 586, 2 mi s Cole field	¶20	1811
G. G. Mortimer, Mauricio Lopez 7, sec 114 (Lopez)	400	2185
Maria L. Lopez 4, sec 112 (Lopez)	550	2213
Sierra Oil & Royalty, Billings 3-A, sec 113 (Lopez)	*	22
WILLIAMSON COUNTY—		
Glass Bros., A. Albert 1, 723 ft el, 1570 ft sl of 265-ac tr, P. Coursey sur	*	785
ZAPATA COUNTY—		
J. W. Magee, Bruni 1, 330 ft nel and sel blk 45, Blas Uribe tr., J. S. Borrego gr (Blas Uribe)	*	2309
Texas, Whitehead, 82, C. Blanco sur, (Escobas), pb 1226	40	1258

*Failures; †Junked; ‡Million cu. ft. gas.

GETTING DEEP

Hidalgo County test near production level

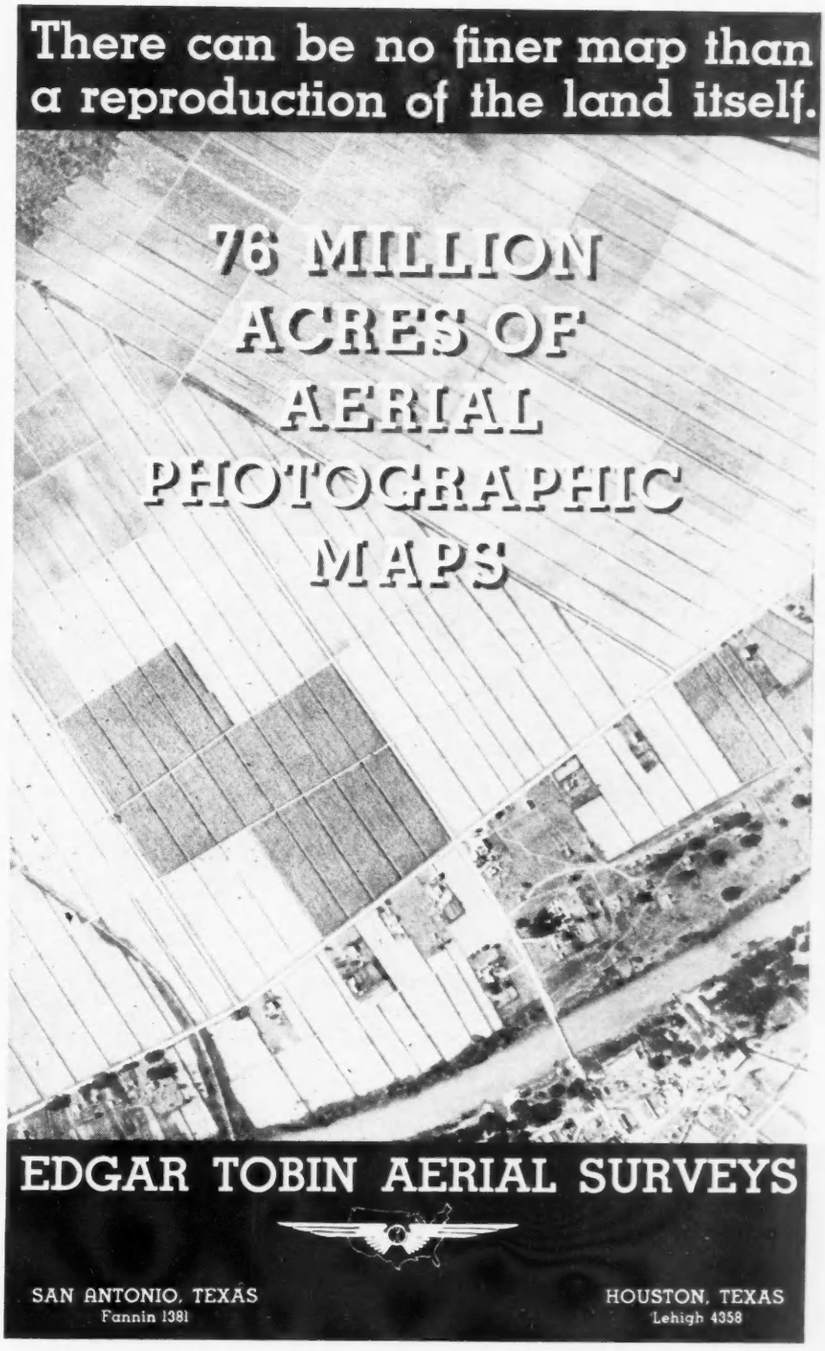
Mission.—Union Sulphur Company's American Rio Grande Land & Irrigation Company 7, Mercedes district of Hidalgo County, was making hole below 7235 feet, and due to pick up the 7500-foot production over the week-end.

The well is located 660 feet from the north line and 330 feet from the east line of Tract 2309, Block 59, and is 4000 feet east of production in the field. In the main field, Union Sulphur Company No. 8 is drilling around 650 feet.

A campaign to outline the Mestenas field, also in Hidalgo County, is in prospect with a rig being moved in to deepen Gulf States Oil Company's Delta Orchards 1, located one mile south of the discovery well. It is at 1675 feet. Same company has location for Engelman 3, located about 600 feet east of the discovery well. Quintana Petroleum Company is ready to set surface casing in Engelman 1, located four miles southeast of the discovery well.

Samfordyce field reported six active rigs during the week, an increase over any period since the first of the year.

In Starr County, the most outstanding well is A. J. Weyel's Wardner (Woods) 1, located several miles east


There can be no finer map than a reproduction of the land itself.
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EDGAR TOBIN AERIAL SURVEYS
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Fannin 1381
HOUSTON, TEXAS
Lehigh 4358

of Rio Grande City. This well blew out and ran wild about three weeks ago from 2051 feet. It has been blowing considerable gas and salt water continuously since that time. A string of four joints of 10-inch casing has been dropped into the hole and efforts are being made to control it.

Wildcatting activity generally is about normal, although several key wildcats have been commenced in Hidalgo County.

NEAR COMPLETIONS

Pearsall wells are near producing formation

San Antonio.—Amerada Petroleum Corporation's operations in the Pearsall district of Pearsall retained the spotlight of Balcones fault zone interest during the week with several wells at critical stages.

A 2¾-mile southwest extension to the Pearsall field is anticipated as Amerada Petroleum Corporation began running casing on Cory & McWilliams 1 at an unannounced depth below 5400 feet. The well has a showing in the Austin chalk but details are not known. The company's other two wells on the Halff & Oppenheimer land are drilling. Well No. 5 is below 3600 feet while No. 6 has passed the 3000-foot mark.

Thornton Davis et al's Halff and Oppenheimer 1, located one mile west of the 3900-foot Navarro sand production of the Pearsall field, failed to pick up the sand and was reaming at 3973 feet to be carried ahead. It will go to 4250 feet, possibly deeper.

A couple of interesting wildcats are being drilled in Bexar County. One is H. A. Pagenkopf's Charles Rittiman, 12 miles northeast of San Antonio which is drilling in Edwards lime at 1467 feet. The lime was topped at 1043 feet and has been rather porous to its present depth, although no sulphur water nor oil saturation has been encountered. The section also has been of odd appearance, hence is attracting much attention. The well is to be carried to the Glen Rose if production is not found shallower.

O. M. Owensby et al's Coreth 1, west of the Eckert field, is testing a gas showing in the Austin chalk at 1091 feet, casing set at 1060 feet. It is in the vicinity of several wells, all of which had fair gas showings. Several miles southwest of this well, Joe Deupree's Russell 1, also a wildcat, treated with 500 gallons of acid in the lower Taylor marl at 1001 feet, but the response was not so great.

SEEK LOWER RATIO

Austin.—The Mills Bennett Production Company, at a hearing before the Texas Railroad Commission last week, urged the installation of regulations in the West Tuleta field, which would result in the reduction of gas/oil ratios there.

H. R. Bennett told the commission that the excessive ratios were very wasteful, and pointed out that although his company had applied for relief during the summer of 1935, nothing had been done that would produce the result desired. He cited instances of gas/oil ratios as high as 183,000/1.

Waiting on Amelia

IMPORTANT WELL EXPECTED TO COMPLETE AT ONCE

WEEKLY STAFF REPORT

Houston.—Attention in the Gulf Coast is centered on Amelia prospect, near Beaumont, where Humble Oil & Refining Company is preparing to complete Langham 1, which showed commercial oil possibilities a week ago. The well is in the H. Williams Survey, Jefferson County. Seven-inch casing has been set at 6777 feet, and plugs are expected to be drilled at once.

This well has cored and tested several times, and indications are that it will be a good producer. On a drill stem test from 6772 to 6791 feet, 3440 feet of oil with a 98-pound pressure were recovered in 27 minutes through quarter-inch chokes. Afterwards the test was cored to 6817 feet, where a drill stem test showed 3600 feet of salt water in 10 minutes. The well was then plugged back to 6777 feet and will be completed in sand from 6772 to 6791 feet.

Humble Oil & Refining Company has made location for Hebert Broussard 1 in the Amelia area. The well is located 466 feet each way out of the south corner of a 72.6-acre tract in block 2 in the C. Williams Survey. The test will be located east of the discovery well. The operators have not announced location for Brock 1, as yet but it is reported that a location will be announced shortly. The lease is reported to expire within a short time. The lease is located north of the discovery well.

TEXAS GULF COAST

Completions

Company,- Well and Location	Init. Prod. Bbls	Depth
ANAHUAC—		
Sun, White 6	650	7083
CLAY CREEK—		
Sun, Hunt 6	*	4165
CONROE—		
A. A. Cameron, Kidd 1	528	5080
BIG CREEK—		
Martis Drill Co., W. C. Moore 1	*	lcn.
BLUE RIDGE—		
B. M. Wallace, Blakely 1	300	3975
DICKINSON—		
Humble, Anderson 2	456	9112
HASTINGS—		
Stanolind, Drake 2	632	6080
HIGH ISLAND—		
Stanolind, Cade 51	250	6272
TOMBALL—		
Humble, Handy 2	552	5559
BURLESON COUNTY—		
Carl Dyer et al, Young 1, s of Caldwell, J. Bird sur	*	1740

*Failures; †Junked; ¶Million cu. ft. gas.

Glenn H. McCarthy will spud in on Longe 1 today. The test is located two miles north of Humble Oil & Refining Company's possible discovery well. The well is being drilled on farm out acreage of Stanolind Oil & Gas Company. The latter operators acquired this block, when controlling stock was bought in Yount Lee Oil Company the past year.

Acreage in the Amelia area has jumped from $500 to $1000 per acre and also the same prices are being paid for royalty. However, the entire area is practically under lease to several major oil companies, with a few independent oil operators having small spreads nearby. It is reported that several of the independent operators are seeking drilling permits in the area, but as yet no permits have been granted.

Five Wells Near Completion

Humble Oil & Refining Company has five wells in the Anahuac field, Chambers County, down to the producing horizon and ready for completion.

Humble Oil & Refining Company's Engles 7 will extend the field approximately 1000 feet in the easterly and north direction when it is completed. At the end of the week the well was waiting on cement to set at 7040 feet in oil sand, total depth of 7082 feet. Top of the gas sand was logged at 6927 feet and oil sand at 7000 feet. The well is located 466 feet north of the south line and 1009 feet east of Engles 6, in the H. & T. C. Survey, Section 50.

The company's White 6, J. McGahe Survey, on the north side of the field, was waiting on cement to set at 7081 feet. Top of the sand was encountered around 7082 feet, and depth is 7110 feet. The well will extend the field one location north when it is completed as an oil producer. Humble Oil & Refining Company White 6, one location north of White 5, is running lower than wells previously completed on the north side of the Anahuac field, which may indicate production will not be extended much further. The operators did not make location for White 7 north of White 6 as anticipated, but east of White 6.

Broussard 7, on the southwest side of the field in the H. & T. C. Survey, No. 63, was waiting at 7080 feet on seven-inch casing cemented at 7040 feet to set. Top of the gas sand was topped at 6964 feet.

The same company's Zappe 3 was down to 7015 feet in oil sand at the end of the week, after having topped the formation at 6992 feet. The well is 859 feet north of Zappe 1 and 466 feet

west of the east line of the H. & T. C. Survey, Section 51.

Wildcat Tests Salt Water

Cockburn Oil Corporation's Cruse 1, Keno prospect, H. & T. C. Survey, No. 103, abstract 164, San Jacinto County, cored salt water sand 174 feet in the Cockfield formation during the past week. The well had salt water sand from 5310 to 5328 feet. The well will probably be drilled down to 5400 or 5450 feet and then abandoned. The wildcat topped the Cockfield at 5136 feet. Elevation is 154 and 150 feet.

Daily & Boeauden's Knox 1, F. Chairs Survey, Polk County, was drilling in shale at 2263 feet at the end of the week after making a drill stem test up in the hole. A sand cored from 1730 to 1744 feet had a show of gas. On a drill stem test from 1373 to 1401 feet the well made three fourbles and one single of mud and sand with a slight show of gas. The drill stem test was made in two minutes. A drill stem test from 1373 to 1405 feet, which was made in 24 minutes through a quarter-inch choke, had three fourbles and 12 stands of brackish water.

Stanolind Oil & Gas Company's Cooper 1, west offset to the discovery well in the Turtle Bay field, Chambers County, was swabbing at 3000 feet and showing clean pipe line oil February 7. The well has failed to kick off and start flowing, but is expected to after the operators reach the bottom of the hole.

Last week the well flowed 20 barrels per hour through a half-inch choke, showing salt water. The hole was plugged back to 6611 feet. The test topped the Discorbis at 5680 feet, Heterostegina 5995, and the Marginulina at 6270 feet. Elevation is 13 feet. According to these markers and with those on the discovery well the two wells are practically flat.

Stanolind Oil & Gas Company's Cooper 1 is 466 feet from the south and east line of a 140-acre tract in the S. Burney Survey and is a west offset to the discovery well.

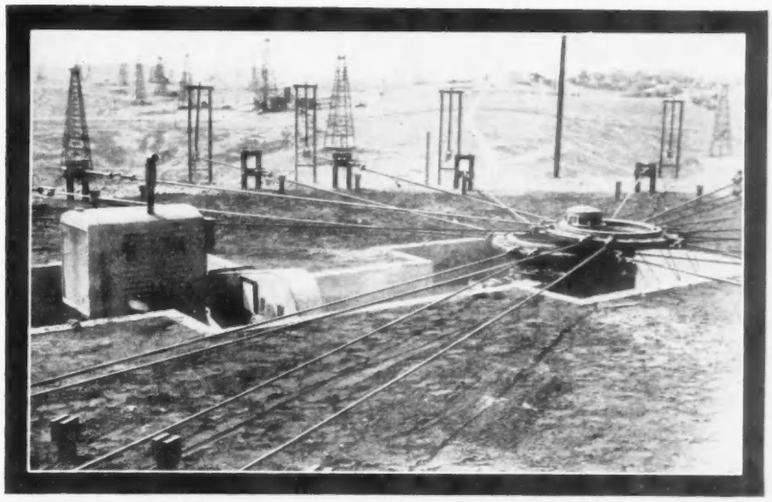
Dickinson Field Extended

The deep producing sand for the Dickinson field, Galveston County, was extended 1000 feet northward the past week when Humble Oil & Refining Company completed Anderson 2 at 9112 feet for 19 barrels per hour. A drill stem test was made from 9098 to 9112 feet through a quarter- and three eights-inch choke with 500 pounds pressure shown. Two-and-half-inch tubing was hung at 8988 feet. The well came in for 19 barrels of 36.6 corrected gravity oil per hour through a quarter-inch choke. Tubing pressure was 2350 pounds; casing pressure 2925 feet. The well topped the Discorbis at 6330 feet, Marginulina at 6685 feet and Frio at 6900 feet.

The extension test is located 352 feet west of east line and 777 feet east of west line and 338 feet north of south line of Lot 2, block 15 in the Righters subdivision in the J. Sellers Survey.

Humble Oil & Refining Company's San Leon B-1, 2500 feet northeast of the Dickinson field, and the same distance northeast of San Leon 1, A. E. Edwards Survey, was brought in as a gas well. It was drilled originally to 9199 feet, and after plugging back a number of times and making a drill stem test, seven-inch casing was set at 8476 feet and cement was drilled to 8442 feet. The casing was perforated from 8325 to 8375 feet with 20 holes. The well came in through a quarter-inch choke. The well topped the Discorbis at 6587 feet, Marginulina 7078, and the Frio at 7560 feet. Elevation is 15 and six feet.

Humble Oil & Refining Company's Maco Stewart B-3, J. Sellers Survey, the most southwesterly drilling well in the Dickinson field, was at 8510 feet the plugged back depth. The casing was perforated from 8505 to 8510 feet with 10 shots. A drill stem test from 8505 to 8510 feet showed 810 feet of mud and a show of gas in 35 minutes through quarter-inch chokes. On a second drill stem test from the same depths the well started flowing oil, gas, mud and salt water. The test was made through quarter-inch chokes and showed a pressure of 400 pounds. The hole was plugged back to 8492 feet and casing perforated from 8410 to 8429 feet with 20 holes. A drill stem test taken from 8410 to 8420 feet. The test was made in two hours. In 42 minutes the well flowed 40 percent oil and 50 percent salt water with a 175-



THIS WAUKESHA ENGINE IS PUMPING 19 WELLS

On the Missouri Lease of the Associated Oil Company, in the old Kern Field near Bakersfield, California, this 35-45 hp. VIKU Waukesha Pumping Engine is driving an Oil Well Supply Company No. 50 Oilbath Geared Power Installation which is handling nineteen wells, tubed to an average depth of 800 ft., mostly with 3-in. tubing. And, in addition, the same power unit handles three jack pumps, used for collecting oil from a sump and transporting it to distant reservoirs.

The oil is 14° gravity and gross production about 1200 barrels a day; 10 to 20 per cent is oil, the rest water. The pumping power operates at from eight to ten strokes per minute. It takes a Waukesha Engine to do a pumping job like this!

Originally the engine operated on fuel gas obtained from the lease. At present it is running on purchased fuel costing thirty cents per thousand cu. ft. With a fuel consumption of 12,000 cu. ft. daily, the per diem fuel cost is $3.60. The engine operates at 1100 rpm with a V-belt drive from the reduction gear on the crankcase to an extended pinion drive from the power, total reduction being approximately 110-1.

Waukesha Oil Well Pumping Engines range in size from 15 hp. up. *Write* for Bulletin 970. *Waukesha Motor Company, Waukesha, Wis.*

WAUKESHA ENGINES

pound pressure. The casing was again perforated from 8485 to 8590 feet with six shots and a drill stem test made at this depth. The test was made through quarter-inch chokes and the testing tool was open 1½ hours. The well started flowing 50 percent oil and 50 percent salt water in 34 minutes at the rate of 35 barrels per hour. At the end of the week the operators were waiting on cement to set at 8400 feet.

Stanolind Oil & Gas Company has made location for Shaw 4 and 5 in the Hastings field, Brazoria County, and rigs will be moved to the locations as soon as permits are received to drill the wells. Shaw 4 is 330 feet south and 990 feet west of the most easterly northeast corner of the Shaw 120-acre tract in the H. & T. B. Survey, No. 36. Shaw 5 is 330 feet west and 990 feet south of the northerly northeast corner of the 120-acre tract in the H. & T. B. Survey, No. 36.

Wildcat Swabs Salt Water

Helmerich & Payne's Hawkins 1, D. A. McCarthy Survey, Sheppards Mott area, Matagorda County, was swabbing salt water with a trace of oil at 7816 feet February 7. The operators ran 30 feet of screen the previous week from 7766 to 7793 feet and after swabbing down to 4000 feet the well showed salt water and a little oil.

H. M. Smith Corporation, discoverer of the field, has made location for Wadsworth 2, 150 feet south of the north line and 300 feet west of the east line of lot 33, block 4, or 3512 feet east and 300 feet south of the discovery well in the S. R. Fisher Survey.

H. M. Smith Corporation's Wadsworth 1, discovery well for the field, is being worked over. The test is being swabbed to make it flow. It has been producing approximately five barrels daily for some time by heads.

Strake Petroleum Corporation has staked location for W. Eggers 1, on the Poole prospect in Brazoria County. The wildcat is located 150 feet north from the north line of the Cedar Lake and approximately 750 varas south of south corner of W. Harding Survey in the E. K. Poole Survey.

Strake Petroleum Corporation has approximately 15,000 acres in this area, blocked up some time ago. The company worked in the area with geophysical instruments in 1934 and 1935.

Cockburn Oil Corporation has made location for a wildcat on the Leach prospect in Wharton County. It will be T. Conner 1, 1980 feet from the north line and 1980 feet from the west line of Section 73 on an 80-acre tract in the E. T. R. R. Survey. The prospect is approximately four miles south of Hilje.

This prospect was discovered by H. C. Cockburn with torsion balance and reflection seismograph in 1931. Gas seepage and surface high also gave indication of the existence of a dome. Three wells have been drilled on the prospect, the deepest being 5026 feet. The two shallow wells went to 1600 feet and are reported to have had showings of gas.

In the Pickett Ridge field, Wharton County, Trinity Drilling Company has made location for J. Norek 1. It is 488 feet out of the south corner of I. & G. N. Survey, Section 76.

BARBERS HILL

Austin.—A hearing on the Barbers Hill field in Chambers County has been scheduled by the Texas Railroad Commission for February 14 at Austin.

Operators in the field have worked out a plan to have the field allowable assigned on the basis of leases rather than wells.

This plan is advocated because of the wide difference in the capacity of wells located only a short distance apart on the same lease. Because production is from several horizons at varying depths, from sand lenses rather than from a blanket sand, potentials are far from uniform.

The application of uniform allowables is impractical for these reasons, so some of the operators believe.

The question has arisen several times at recent statewide proration hearings, but this is the first time that a special meeting to consider this problem has been called.

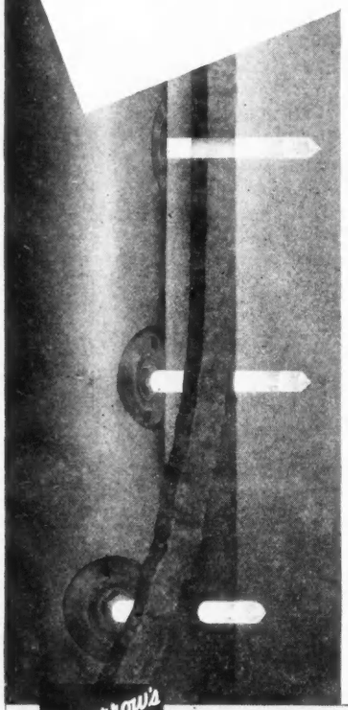
PLACEDO RULES

Austin.—Rules for operating in the Placedo field in Victoria County were issued by the Texas Railroad Commission last week.

These rules provide that the wells in the field shall be spaced 330 feet from lease lines and 660 feet apart, or in the center of square 10-acre units. A minimum of 850 feet of surface casing is required under the new order.

HOT FLASH

Gun Perforator Helps Produce New Horizon in Gillis Field, South Louisiana



"A new producing horizon was found in the Gillis field, Calcasieu Parish, during the past week when Union Sulphur Company worked over Barbe Estate 5, from 6767 feet and completed the well 300 feet shallower than previous producing wells.

"The well was originally completed at 6767 feet. After reworking, the well casing was *perforated* from 6413 to 6419 feet with 20 holes. The well was swabbed and it made 69 barrels of oil and then went dead. The hole was swabbed down to 4500 feet and after letting the swab set for some time the well came in, making 600 barrels of pipe line oil daily through a quarter inch choke with a tubing pressure of 1850 pounds. The gravity was 37.4 degrees. While the well was shut in the pressure built up to 2000 pounds." —THE OIL WEEKLY.

NOTE: The above job shows that thorough swabbing is sometimes necessary to get best results after perforating . . . . Other treatments after perforating are in daily use. Lane-Wells Sales-Engineers will be glad to advise you on the method best applicable to your location.

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OUTPOST SHOWS

Gillis and English Bayou may be connected

Lake Charles.—The Gillis and English Bayou fields, Calcasieu Parish, which are located but one mile apart, stand a good chance of being connected since Union Sulphur Company's Castle 6 has cored sands with oil odors from 5300 to 5436 feet. If the well should strike a good oil sand and make a producer, it will no doubt connect the two fields, which heretofore have been considered two separate fields.

Union Sulphur Company's Castle 6, 4000 feet northeast of the nearest producer in the English Bayou field and around 3000 feet southeast of the nearest producer in the Gillis field, was drilling ahead in sand with an odor of oil at 5440 feet at the end of the week. During the past week the company made a drill stem test around 5430 feet, but is was unsuccessful, as the testing tool failed to hold. The operators recovered mud and water with a trace of oil in one minute. The well did not show any salt water. Union Sulphur Company cored over 10 feet of sand from 5422 to 5432 feet that contained a good odor of oil. The test also had odor of oil with a slight gas show at 5289 to 5295 feet. Another sand was cored from 5240 to 5250 feet. Some geologists are of the opinion that the well is in a "graben" and will not produce, while others are of the opinion that the well will produce and connect the two fields, making one of the largest fields in the Louisiana Gulf Coast.

Fohs Oil Company has made location for Frost 1, which is located south of the Gillis field. It is Fohs Oil Company's first attempt to get production at Gillis. The test is located 425 feet west and 200 feet north of the southeast corner of Section 11-9s-8w.

Fohs Oil Company completed Castle 9 to extend the English Bayou field approximately 1000 feet east. The well came in at 7079 feet making 600 barrels daily of 42.3 gravity pipe line oil through a quarter-inch choke. Tubing pressure was 2075 pounds; casing pressure 1250 pounds.

The test is located southeast of Castle 3 and southwest of Castle 4, which were both dry holes. It is 1000 feet east of Castle 5, Section 13-9s18w. The dry holes are on the down throw side of a fault.

Discovery Makes Salt Water

Magnolia Petroleum Company's Broussard 1, discovery well for the Big Lake field, Section 13-12s-9w, Cameron Parish, started making six percent salt water during the past week at 7975 feet. The well was making approximately 3,000,000 cubic feet of gas daily along with 40 barrels of 49.7 gravity distillate through a sixteen sixty-fourths-inch choke. The distillate showed six percent salt water. Tubing pressure was 250 pounds; casing pressure 2750 pounds. The well was drilled to 9501 feet and casing was perforated from 7944 to 7966 feet with 25 holes.

Humble Oil & Refining Company completed Kratzer 5 in the Roanoke field, Jefferson Davis Parish, during

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the past week. The well was drilled to 8694 feet in oil sand with the top of the producing horizon at 8690 feet. Seven-inch casing was set at 8688 feet. The well came in for 600 barrels daily through a quarter-inch choke with a tubing pressure of 1150 pounds; casing pressure 1475 pounds. The oil was 40.6 degrees gravity.

Well Threatens to Blow Out

In the St. Martinsville field, St. Martin Parish, Coastal Plains Oil Company's Ledeux 1, 2000 feet northeast of the discovery well, Section 57-11s-6e, threatened to blow out during the past week at 5693 feet. The well had been standing for some time. An electrical logging device was run and operators put in 11-pound mud and a cement plug at 1140 feet. The hole is temporarily abandoned.

Tide Water Oil Company's Smede 2, 660 feet south and west of the discovery well, Section 57-11s-6e, was drilling below 8096 feet at the end of the week in hard sandy shale. The operators had to put on a rock bit.

Basile Oil Company's Hirsch 1, southeast of Hampton, Section 14-6s-2w, Evangeline Parish, was drilling ahead below 7536 feet at the end of the week after topping a sand at 7185 feet.

Continental Oil Company was preparing to plug back its Klump 1, Tepetate field, Acadia Parish, and rework the test after it started showing salt water. The well was completed at 8377 feet some time ago and came in making 20 percent salt water.

The same operator's Marcentel 1 was milling over two and one half-inch tubing at the end of the week and is expected to recomplete around 8328 feet. The company has two other wells drilling in the field.

Continental Oil Company is to build a loading wharf on the Calcasieu river below the Gillis and English Bayou field in Calcasieu Parish, laying two lines from the Tepetate field, one an eight- and the other a six-inch line in the same ditch, to the loading wharf. The eight-inch line will be a gas line and will furnish the industries at Lake Charles and the six-inch line will carry oil to the loading rack. The distance is approximately 50 miles.

Superior Oil Producing Company and Woodley Petroleum Company's M. Savoy 1, Bayou Mallet field, Section 47-7s-1e, was drilling at 6982 feet in shale and sand at the end of the week and should be down to the producing sand the coming week which was discovered by Adams Smith 1, some time ago.

Adams Smith 1 was completed at 7190 to 7178 feet after perforating casing. It came in January 4, 1936, for 3,000,000 cubic feet of gas daily with 20 barrels of distillate. At the end of the past week the well was making approximately 500,000 cubic feet of gas daily along with 15 barrels of 46.8 gravity distillate through a ten sixty-fourths-inch choke. The pressures are around 2650 pounds.

The second producer for the Garden Island Bay field, Plaquemines Parish, was completed at the end of the week when The Texas Company brought in Garden Island Bay 17 for 295 barrels per day of 38.4 gravity pipe line oil through a three eighths-inch choke from 4905 feet.

The well was drilled to 5527 feet in salt with the top of the salt found at 5516 feet. The hole was plugged back to 4968 feet and was redrilled down to the sand showing oil. Seven and five eighths-inch casing was set and cemented at 4977 feet. The sand showing oil was found from 4895 to 4905 feet. The casing was perforated from 4895 to 4905 feet with 10 holes and the well came in for the above initial production. The test is located 1970 feet north and 1648 feet east of the southwest corner of Section 37-23s-33e.

This Job of Shooting Casing and Drill Pipe

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SOUTH LOUISIANA

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
CAILLOU ISLAND—		
Texas Co., State Caillou Island 26	1018	4264
ENGLISH BAYOU—		
Fohs Oil Co., Castle 9	600	7079
GARDEN ISLAND—		
Texas Co., Garden Island Bay 17	295	4905
VINTON—		
Wilson Breach Oil Co., Wilson Strip 17	400	3958

*Failures; †Junked; ¶Million cu. ft. gas.

COAST OUTPUT

Louisiana Gulf Coast has 734 producing oil wells

New Orleans.—There are 734 wells producing oil on the Louisiana Gulf Coast, which yields approximately 131,053 barrels daily. Of the 734 producing wells only 305 wells produce over 100 barrels daily.

The field having the largest number of producing wells is Vinton, in Calcasieu Parish. It has 83 producing wells, only four of which produce over 100 barrels daily. The field is producing around 2000 barrels of crude oil daily.

The next field having the greatest number of producing wells is Leesville, in Lafourche Parish. This field has 75 wells making around 13,700 barrels daily. This field has 41 wells producing over 100 barrels daily.

The Iowa field has 59 oil wells which produces 16,700 barrels daily. The field has 44 wells producing over 100 barrels.

In the Bosco field, Acadia and St. Landry Parishes, there are 58 producing wells averaging 15,200 barrels. There are 48 wells producing 100 barrels or more daily with the remaining 10 producing less. However, 23 of the 48 wells produce from four to 94 percent salt water.

Lake Charles.—Effective February 1, 1936, the daily allowable for the Louisiana Gulf Coast was placed at 128,500 barrels. The second order was issued by the Department of Conservation of Minerals Division of the State of Louisiana. Listed below are the fields and the daily allowables for each field:

Fields—	No. Bbls.
Basile	1,650
Bayou Choctaw	1,050
Black Bayou	2,250
Bosco	16,500
Bunkie	250
Caillou Island	10,850
Cameron Meadows	5,000
Darrow	900
Dog Lake	850
East Hackberry	6,750
English Bayou	5,700
Evangeline	1,500
Four Isle	500
Garden Island Bay	1,000
Gillis	6,300
Gueydan	250
Iberia	3,000
Iowa	18,500
Jeanerette	650
Lafitte	3,000
Lake Barre	9,250
Lake Hermitage	300
Lake Pelto	500
Lake Washington	1,500
Leeville	13,500
Lockport	1,400
Port Barre	3,000
Roanoke	5,000
St. Martinsville	850
Starks	550
Sulphur Mines	2,250
Sweet Lake	1,100
Vinton	2,150
White Castle	750
Total	128,550

Sligo Looking Up

TEST INDICATES ANOTHER RODESSA IS POSSIBILITY

WEEKLY STAFF REPORT

Shreveport, La.—Although Producers Oil & Gas Company's Pettit 1, NE SW 17-17n-11w, Sligo gas field, Bossier Parish, completed recently in a new horizon of the Glen Rose below the anhydrite, at 5199 feet, it is not so large in volume as first production test indicated, the thickness of the formation in which the gas was found lends strength to the theory that another Rodessa field that eventually will yield oil has been found. This well gauged 12,346,000 cubic feet of gas through tubing, with casing pressure of 2110 pounds and tubing pressure of 2150 pounds, and is making 190 barrels of 53.6 distillate daily along with the gas.

The well correlates with Rodessa productive horizons and logged the formations corresponding to the four gas and oil producing sands in that field, as follows: Hill sand, 4269-4387 feet; Gloyd and Dess sands (no line of differentiation), 4387-5044 feet; and Young sand 5044 to 5199 feet. Elevation of the new Sligo gasser is 198 feet and formations were logged as follows: top of Nacatosh, 892 feet; chalk 1265-1730 feet; Blossom (Ozan) 2175 feet; top of red beds 2560 feet; top of first anhydrite, 3672 feet; top of massive anhydrite 3912 feet; base of massive anhydrite 4142 feet; base of stringer anhydrite, 4230 feet. The casing record follows: 12½-inch at 216 feet; 9⅝-inch at 3991 feet; and 7-inch with the last 116 feet perforated, at bottom of the hole, 5199 feet.

Considerable trading in leases and royalties has followed completion of this well. Following purchases are indicative of the prices paid: J. E. Veath of Fort Worth, Texas, $2400 for NE NW and NW NE 34-17n-11w; J. E. Hardy, $3000 for 240 acres located in Sections 27, 34 and 35-17n-11w; M. L. Weaver of Oklahoma City, $750 for NW SE and NE SW 26-17n-11w; G. M. Le Grand paid about the same price for 50 acres in Sections 24-1n-11w and 19-17n-10w.

American Liberty Oil Company's J. B. Rodgers 1, C. M. Robinson Survey, Cass County, Texas, 2½ miles west of Rodessa production, after drilling to 7010 feet where it tested salt water, was plugged back to 6057 feet and tested again where it showed salt water. The test was then plugged back inside the casing to the Hill sand which was logged from 5800 to 5920 feet, and casing perforated, the well showing for three million cubic feet of gas daily and a little distillate, flowing through a half-inch tubing choke with tubing pressure 1800 pounds. No water appeared in the Hill sand test. The well is shut in.

United Gas Company completed three oil wells in Rodessa last week, all within proven limits. These producers are: Tyson 1, Section 14-23n-16w, elevation 248 feet, completed at 6020 feet, flowing 45 barrels per hour through half-inch tubing choke, with tubing pressure 680 pounds and casing pressure 210 pounds; Tyson 2, Section 14-23n-16w, elevation 252 feet, completed at 6025 feet, flowing 47 barrels per hour through half-inch tubing choke, with tubing pressure 675 pounds and casing pressure 375 pounds; Tyson 4, Section 13-23n-16w, elevation 249 feet, completed at 6025 feet, flowing 55 barrels per hour through one-half-inch tubing choke, with tubing pressure 1400 pounds and casing pressure 1525 pounds.

American-Liberty Oil Company's well, although making only three million feet of gas daily through quarter-inch choke, is believed good for an open flow capacity of 30 to 40 million cubic feet daily. The casing was perforated in the Hill sand at 5800 to 5830 feet. It is probable that the productive zone is not so thick as farther up the structure at Rodessa.

On the strength of the well being com-

Rodessa Drilling

The Rodessa drilling report, including only wells drilling below 5000 feet, for last week, follows:

Bartex Pipe Line Co.'s Sarah Bruner 1, 13-23n-16w, elev 244 ft, top red beds 3350 ft, dr 5490 ft anhydrite.

Danciger O&R Co.'s Willis 1, 23-23n-16w, coring 5996 ft.

Haynes Prod. Co.'s Tyson 1, dr 5415 ft anhydrite.

Lion O&R Co.'s Jno. M. Wynn 1, ne sw 9-23n-15w, elev 341 ft, top first anhydrite 5212 ft, top massive anhydrite 5477 ft, base stringer anhydrite 5818 ft, top Hill sand 5862 ft, base Gloyd sand 6092 ft, coring 6118 ft. R. W. Norton's Mary Rives 1, Jno. Collum sur. (Cass County), dr 5893 ft. Pelican Oil & Gasoline Co.'s Sexton 9, 14-23n-16w, dr 5720 ft; Sexton 10, lub hung drill stem 5726 ft; Sexton 11, 14-23n-16w, dr 5080 ft shale bro anhydrite, top anhydrite 5032 ft; Sexton 12, 14-23n-16, coring 6000 ft.

Marr & Perkins' Hunter 2, 13-23n-16w, dr 5940 ft.

United Gas Pub. Serv. Co.'s Ardis 3, 14-23n-16w, dr 5848 ft; Ardis 4, 14-23n-16w, dr 5462 ft; Rodessa 10, dr 5120 ft; W. B. Spearman 2, nw nw 22-23n-16w, dr 5906 ft; Tyson 3, 13-23n-16w, cemtd 7-in csg, td 6028 ft.

Pertinent Fact!

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SHREVEPORT, LOUISIANA

Lake Charles—Houma—Converse
Rodessa—Monroe—Kilgore
Greggton

pleted as a gasser, American-Liberty Oil Company made location for D. A. Maxie 1 (85-acre tract) in the John Collum Survey, a quarter-mile east of Rodgers 1.

Hampered by rain, sleet and snow during the last week as was the entire Rodessa area, the outcome of Lion Oil Refining Company's John M. Wynn 1, NE SW 9-23n-15w, Caddo Parish, 1½ miles east of production, was still in doubt last week as the test logged probable base of the Gloyd formation at 6092 feet and was coring ahead below 6110 feet for the Dees, which it is believed may carry oil production. The Dees is the third and lowest of the three gas horizons in Rodessa proper and down the flanks has produced oil in two commercial wells. A core from 6086 to 6092 feet at base of the Gloyd showed considerable gas and some oil but the lime was not saturated enough to test unless production fails to materialize farther down. This hole was off one degree at 4000 feet.

Another outpost test at Rodessa caused some interest by logging the anhydrite 55 feet higher than expected. This test is Haynes Production Company's Zylks 1, SE SE 9-23n-16w, one mile west of Vaughn Production Company's Comegys 1, SE SE 10-23n-16w, that was only a small oil well, it being one mile northwest of production. Zylks 1 logged the anhydrite 55 feet higher than Vaughn Production Company's Comegys 1. As mapped by sub-surface geology it should have checked normally with Comegys 1.

A half-mile south of R. W. Norton's Haywood 1, Priscilla Evans Survey, Cass County, Texas, the only Rodessa oil well across the Texas line, the same operator's Mary Rives 1, John Collum Survey, last week was drilling below 5893 feet; elevation is 277 feet.

Besides the three oil wells completed last week in Rodessa by United Gas Company, the field later yielded two more wells. These are: Arkansas-Louisiana Gas Company's Rodessa 7, Section 23-23n-16w, completed after shooting casing with perforating gun, at 6004 feet, flowing 25 barrels of oil per hour through quarter-inch tubing choke with tubing pressure 750 pounds and casing pressure 1750 pounds. The well is also making three million cubic feet of gas.

O'Brien Brothers completed Rodessa 2, Section 14-23n-16w, flowing 121 barrels per hour through half-inch tubing choke at 6005 feet.

Manahan Oil Company's Comegys 1, Section 10-23n-16w, a half-mile from Vaughn Production Company's Comegys 1 in the same section, which was dry and apparently defined the northwest limits of the field, last week was arranging to use 3000 gallons of acid in an attempt to get a producer.

United Gas Company's Mitchell 1, Section 20-23n-16w, north outpost well in the west part of the field, which showed eight to 35 percent salt water when completed several weeks ago, now is producing clean oil.

R. W. Norton's Haywood 1, Cass County, during the first 28 days it produced, made 37,960 barrels of oil or an average of over 1360 barrels daily. Rodessa with the five wells added last week had a total of 66 oil producers.

The Louisiana Conservation Commission, Minerals division, which has charge of the allowable on the Louisiana side reduced the per-well allowable for February to 500 barrels as compared to 600 barrels for January.

NORTH LOUISIANA
Completions

Company, Well and Location	Bbls Init. Prod.	Depth
BOSSIER PARISH (Sligo)—		
Producers O&G Co., Pettit 1, 17-17n-11w	¶45	5199
DE SOTO PARISH—		
M. L. Stephens et al, Alston 1, 11-11n-16w	*	2619
J. K. Wadley, Logan B-1, 16-10n-12w	¶24½	3280
SABINE PARISH (Converse)—		
Lee Whitehurst, Latham 1, 19-9n-13w	110	1898
SABINE PARISH (Zwolle)—		
Ivan A. Allen, Travis 1, 13-7n-11w.	*	2615

*Failures; †Junked; ¶Million cu. ft. gas.

Shreveport, La.—Tests for possible oolitic lime in the Glen Rose below the anhydrite, the level producing at Rodessa, continues to be the goal of new wildcats projected in North Louisiana.

Last week, Belchic & Laskey of Shreveport were moving in materials for Wheeler A-1, NW NE Section 16-18n-16w, Caddo Parish, in the vicinity of the Blanchard gas field that produces gas from the Nacatosh at 1000 feet and from the possible upper and lower Cretaceous contact at 2700 feet. The new test on a block of 5000 acres is planned for 5000 to 6000 feet.

V. F. Bolin of Fort Worth, Texas, has assembled a 4000-acre block two miles west of Grand Cane, DeSoto Parish, and has derrick up for a 4500-foot test, A. J. Gamble 1, NW SE 26-13-15.

J. P. Evans of Shreveport, who has a large block in the Sibley area, Webster Parish, where Standard Oil Company of Louisiana recently completed assembly of a wildcat block, is planning a deep test in Section 35-18n-9w. Ohio Oil Company has bought 500 acres in Evans' block, paying $25,000 and a 30-day geophysical exploration option has been taken on 500 acres by Phillips Petroleum Company. United Gas Company and Amerada Petroleum Corporation also have taken an interest in the test and block.

Herman L. Brown is taking a block of leases centering in township 14 north, range 6 west, Bienville Parish. It is probable he is taking the leases for Texas-Seaboard Oil Company. Hunt Production Company paid $180 for 120 acres in Sections 11 and 14-15n-6w, Bienville Parish. A great deal of activity is noted in Bienville Parish around blocks already assembled for early tests. B. B. McBride has taken the 2500-acre block assembled by himself and W. I. Wilkie et al.

Gulf Oil Corporation has made location for W. T. Thrasher 1, SW SW 13-15n-7w, Bienville Parish, for a 2700-foot test on a 4000-acre block recently taken from Walter George.

In Sabine Parish, between the Converse and Zwolle fields, J. R. Keen of Kilgore, Texas, has re-taken 2000 acres of leases for Primrose Oil Company. The block centers around Section 5-8n-13w. The leases require spudding a well before April 1 to go to 4500 feet. In Section 10-8n-13w, the deepest hole ever drilled in North Louisiana was R. L. Gay's Long-Bell Lumber Company 1, which went to 7154 feet before being abandoned. This test recovered a saturated oil core at 4775 feet in oolitic lime of the Glen Rose but dropped casing to bottom of the hole, shutting off the producing level and when it later plugged back and sidetracked at this horizon, tested salt water. Keen drilled a test in Section 31-9n-13w, before discovery of the Converse field in October, 1932.

After Converse was discovered, Gay drilled Long-Bell 3 in Section 5-8n-13w, to 2049 feet in the chalk and the well flowed 60 barrels per hour for two hours and then ceased to flow. The well later developed a suction and was abandoned.

H. L. Hunt made location for a deep test in Louisiana Central Lumber Company 1, SE SW 33-10n-3e, LaSalle Parish, on a large block recently assembled in LaSalle, Caldwell and Catahoula Parishes.

Standard Oil Company of Louisiana has completed shooting by seismograph of the Spider area of DeSoto Parish, which located an anhydrite high centering in Section 24-11n-14w, Desoto Parish, two miles southeast of the old Spider gas field that produced from the contact of the upper and lower Cretaceous. A deep test will be drilled at an early date.

A test of the oolitic lime producing possibilities of the Glen Rose below the anhydrite will be made soon in S. S. Alexander and associates' Stell 1, Section 5-12n-16w, DeSoto Parish, which is running seven-inch casing to set at 4500 feet; total depth of 4902 feet. This well will continue to the 5500-foot level for a test of the oolitic lime,

which was logged at 5458-66 feet in E. T. Oakes' Ramsey 1, Section 30-13n-15w, and carried oil and salt water. Alexander and associates' test logged top of the Annona chalk 97 feet higher than Oakes' test logged that contact, although the normal dip is in the direction of Stell 1.

Geophysical work and leasing continues active in Cass and Marion Counties west and southwest of the Rodessa field. United Gas Company has a seismograph crew working in Marion County, 10 miles west of Jefferson, in the M. H. Ussery headright Survey.

In Cass County, John C. Myers paid $2500 for 25 acres of the H. R. King 100-acre tract, in the B. W. Hopson Survey. There is also some trading going on in royalties.

CARBON BLACK PLANT

Shreveport.—The first carbon black plant for the Rodessa field, north Caddo Parish, may become a reality soon as the result of negotiations now being carried on between Imperial Oil & Gas Products Company of Pittsburgh, Pennsylvania, and Pelican Oil & Gasoline Company of Shreveport, which owns a 120-acre lease in the field. If consummated, Imperial Oil & Gas Products Company, which has properties in the Monroe gas field, will erect the plant on Pelican Oil & Gasoline Company's Sexton lease in Section 14-23n-16w.

LOUISIANA PERMITS

Shreveport.—Fifty-four drilling permits were issued during the last week by the minerals division, Louisiana Conservation Commission. Of this number 36 were for North Louisiana parishes divided among the following: Bienville, one; Caddo, 15, including 14 in Rodessa; DeSoto, one; LaSalle, one; Morehouse, 16; Sabine, one; and Union, one. Those in South Louisiana were divided among the following parishes: Acadia, two; Ascension, two; Calcasieu, four; Iberia, four; Jefferson Davis, one; Plaquemines, one; St. Landry, one; Terrebonne, three.

ARKANAS PERMITS

El Dorado, Ark.—Three drilling permits were issued last week by the Arkansas Board of Conservation. A list of the permits follows: Crawford County—Donald Trumbo, Fayetteville, Arkansas, Cradduck 1, center NW NE 3-11-30; Miller County—J. W. Jones et al, Rodessa, Louisiana, J. H. Bush 1, 330 feet south and west NEc NE NE 2-19-27; Union County—F. C. Henderson, Trustee, El Dorado, Arkansas, Sheppard 1, located 400 feet east and 350 feet north SWc NE NW 35-17-15.

ARKANSAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
UNION COUNTY (Rainbow City)—		
Geo. W. James, Sullivant 1, 12-17-14	*	3305
Ohio Oil Co., R. Furlough 3, 12-17-14	500	3189

*Failures; †Junked; ¶Million cu. ft. gas.

Look Unfavorable

TWO LEA COUNTY TESTS BELOW EXPECTED LEVEL

WEEKLY STAFF REPORT

Hobbs, N. M.—Two of the five tests being drilled by Skelly Oil Company on short term leases near an incomplete wildcat oil producer in eastern Lea County have progressed beyond their projected goal without scoring production, but a third well in the group looks favorable with oil in the hole.

The five-well program was launched in December and January to perpetuate leases situated in four directions from Skelly Oil Company et al's B. F. Harrison 1, C NW SW 5-23s-37e, which showed for commercial production in the 3600-3700-foot sandy-lime zone early last December. The hole was deepened to the dolomite lime horizon at 3796 feet, or 444 feet sub-sea, where it tested sulphur water. It was plugged back at intervals to 3762 feet, and considerable difficulties have developed from cavings after heavy nitro shot at 3491-3754 feet. This original well makes a head of oil through the cavings at intervals. Rotary rig has been moved in to condition the hole.

Skelly Oil Company's Edgar L. Steeler 1, C NW NE 17-23s-37e, situated 1¼ miles southeast of the first strike, used cable tools in drilling below 3497 feet, and is considered eliminated as a potential producer, as it is showing sulphur water while drilling in lime at 3775 feet, with an elevation of 3333 feet. The company's W. H. King 1, C NE SW 6-23s-37e, three quarters of a mile due west of Harrison 1, also missed the sandy-lime pay and was drilling in lime at 3915 feet. Hugh O. Simms 1, C SW NE 4-23s-37e, 1½ miles north by west of Harrison 1, logged 10 feet of sandy-lime pay in drilling to 3648 feet, or 325 feet sub-sea, and is standing with hole half filled with oil while connections are being installed for a swabbing test. Seven-inch pipe was cemented at 3392 feet, and rotary replaced by cable tools at 3474 feet. The other two tests have not reached decisive depths.

A sixth test for the eastern Lea County area is being drilled by Skelly Oil Company on the J. U. Baker 40-acre lease, C SE SW 22-22s-37e, a southeast diagonial offset to Rowan-Nichols Oil Company and Neville G. Penrose's recent wildcat completion on the Will Cary permit. The latter flowed 140 barrels of 40 degrees gravity sweet oil in 14 hours natural from sandy lime at 3520-3555 feet, with an elevation of 3353 feet, and was given a pipe line connection by Humble Pipe Line Company last week. The above operators maintain headquarters at Fort Worth, and plan to defer new drilling until completion of Baker 1, which may require a north offset. They recently purchased the half interest held by J. M. Rush, Dallas contractor, in Cary 1 and the 80-acre lease.

Six new locations authorized last week for Lea County, included two for the Eunice field and four for the Monument field. Devonian Oil Company staked its second location on the north end of the Eunice field to be known as State-Heasley 3, C Lot 1, 5-21s-36e, while Continental Oil Company and The California Company's M. Lockhart 4-A-18, C SW SW 18-21s-36e, is on the west flank of the structure.

Prolific production was uncovered on the south end of the main section of the Eunice field through Empire Gas & Fuel Company's State 3-D, C NE NE 32-21s-36e, developing a natural flow of 331 barrels of oil per hour from lime at 3901 feet, or 286 feet sub-sea. The above flow represented the last hour of a six-hour gauge, and the gas volume was estimated at 25,000,000 cubic feet daily. Two previous completions on the 320-acre lease encountered tight lime condition, and State 1-D was treated three times with acid, while State 2-D failed to respond to acid but flowed 597 barrels in 14 hours after 300-quart nitro shot at 3832-3940 feet. The same company's S. F. Felton 1, C NE NW 28-21s-36e, failed to produce its proration quota after acid treatment in lime at 3900 feet, or 296 feet sub-sea. The oil yield was increased to 700 barrels daily after 300-quart shot at 3750-3900 feet.

Humble Oil & Refining Company's A. J. Adkins 2, C SW SW 10-21s-36e, which recently produced 95 percent sulphur water after acid treatment of lime at 3910 feet, or 319 feet sub-sea, failed to attain a shutoff at 3896 feet and at 3886 feet. The hole has since been plugged back to 3875 feet for further testing.

Plugging orders have been issued for The Texas Company's J. M. Dean-Pure 1, C SE SW 28-22s-36e, situated about two miles south of nearest production in the Eunice field, after drilling to 3922 feet. The dolomite lime section was treated twice with acid, and shot with 350 quarts of nitro.

Monument Extended

Productive limits of the Monument field advanced one location to the west with the completion of Amerada Petroleum Corporation's Chas. H. Weir 1, C SW SW 35-19s-36e, flowing 286 barrels natural through open casing from broken lime at 3836-3944 feet. It is the second completion for the company with cable tools, which were used after cementing seven-inch pipe at 3815 feet. Repollo Oil

Company's J. R. Phillips 1, SWc W½ 31-19s-37e, situated on the east side of the producing area, recorded an initial flow of 255 barrels of oil in five hours through one-inch choke on tubing from lime at 3800-3899 feet. The hole is bottomed at 314 feet below sea level. The Texas Company's J. R. Phillips 1, a south offset, is a new location. Other new locations include Gypsy Oil Company's B. V. Baxter 4 and 5, both offsetting production, and the company's Graham-State 2-A, C NW NE 24-19s-36e.

Crafton Oil Company and Amon G. Carter, Fort Worth, are preparing to run casing for a production test on Hair-Humble 1, C SW NW 11-24s-37e, semi-wildcat situated about 1¼ miles southeast of their G. H. Mattix 1, to complete in sandy lime at 3630-3638 feet with sufficient oil in the hole to indicate a commercial producer. Mattix 1 opened the area last July, and is flowing 35 barrels daily after shot at 3500-3650 feet.

Allowable Increase

Allowable production for the entire state was advanced from 62,000 to 64,000 barrels daily beginning February by order of the Oil Conservation Commission. The United States Bureau of Mines' recommended allowable was 61,300 barrels daily for the period, or a gain of 2000 barrels. Hobbs field started the current month with an allowable of 27,116 barrels daily, representing an increase of 680 barrels, while other Lea County areas remained on a flat well allowable of 114 barrels daily.

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Cut Bank Sunburst

LARGEST WELL FOR AREA EXTENDS MILE NORTHEAST

ROCKY MOUNTAIN FIELDS

WEEKLY STAFF REPORT

Cut Bank, Mont.—Santa Rita Oil & Gas Company's Landers 1, CN SE 16-35n-6w, which was brought in for 900 barrels daily is the largest completion ever made in the Cut Bank field, Glacier County, and the first producer brought in in the Sunburst sand. It is on the northwest side of the Cut Bank oil field, in the Blackfleet Indian Reservation and a mile west of the nearest Cut Bank production, Tribal 4, CN SW 15-35n-6w, which was a completion in the Cut Bank sand at 2975 feet for 130 barrels initial in 1934.

Landers 1 well was considered a failure in the Cut Bank sand at 2975 ft. It was shot with nitro glycerine at the Sunburst horizon, 2850-2865 feet, and filled 900 barrels storage in the first 24 hours.

It is believed completion of this well opens up a prolific Sunburst pool to the north and west of the present Cut Bank field. Santa Rita Oil & Gas Company is starting another test in the NE SE 16-35n-6w as the result of this completion.

Another well was completed this week in the Cut Bank field for a gasser. The Texas Company's Ewing 1, CNW 24-35n-6e, flowed 2,500,000 cubic feet of gas after shot with 60 quarts of nitro glycerine. Hole bottomed at 2875 feet. Top of the Cut Bank sand was found at 2803 feet where it showed only a slight trace of oil. Gas flowed from 2820 and 2830-40 feet.

Many wells in the Cut Bank field which had been shut down were again active this week with 11 wells drilling.

Kevin-Sunburst

Inactivity in the Kevin-Sunburst field, Toole County, northern Montana, continues with only one well drilling despite warmer weather. Eight wells were shut in. Cook & Eddy's Kaskin 1, SW SW SW 25-36n-2w, has found oil in the top of the Sunburst sand at 1522 feet. If this well is completed it will extend the Sunburst sand pool to the north.

MOUNTAIN STATES Completions

Company, Well and Location	Init. Prod. Bbls	Depth
MONTANA		
CUT BANK FIELD (Glacier County)—		
Santa Rita O&G Co., Lander 1, cn se 16-35n-6w	900	2865
Texas Co., Ewing 1, cnw 24-35n-6e	¶2½	2840
PONDERA COUNTY (Valier Area)—		
Texas Co., 1 Unit-2, cnw 21-30n-5w	*	3155
WYOMING		
NIOBRARA COUNTY (Lance Creek Field)—		
Ohio Oil Co., Converse Sheep Co. 7, nw se 32-36n-65w	3120	3788
NEW MEXICO		
LEA COUNTY (Cooper Field)—		
Gypsy, S. R. Cooper 2, c nw se 23-24s-36e	¶1½	3616
LEA COUNTY (Eunice Field)—		
Empire, State 3-D, c ne ne 32-21s-36e	¶20 & 7500	3901
Shell & Devonian Oil Co., State 4, c se ne 20-21s-36e	3600	3918
LEA COUNTY (Monument Field)—		
Amerada, State 2-D, c sw nw 1-20s-36e	1500	3915
Chas. H. Weir 1, c sw sw 35-19s-36e	286	3944
Repollo Oil Co., J. R. Phillips 1, swc w½ 31-19s-37e	2500	3899
Superior Oil Co. (Cal), State 4, c sw ne 2-20s-36e	2040	3912

*Failures; †Junked; ¶Million cu. ft. gas.

WYOMING

Casper, Wyo.—While one large well completed in the Lance Creek field, Niobrara County, eastern Wyoming, Argo Oil Company has started its spring drilling campaign with the spotting of one new well.

Ohio Oil Company completed Converse Sheep Company 7, NW SE 32-36n-65w, for 130 barrels hourly or 3120 barrels daily. The lower Sundance sand was topped at 3720 feet where the seven-inch production string is set. Hole bottoms at 3788 feet. The well is an inside location.

The J. M. Huber Corporation's Jose 1, NE SE NW 6-35n-65w, has been shut down the past week because of storm and waiting to install pumping unit. It is in the west extension area to the Lance Creek field. Hole is plugged to 4032 feet. It was drilled to a total depth of 4072 feet but developed water in the lower part of the third Sundance after showing good oil saturation in the upper part of the sand.

Ohio Oil Company released location for another well in the field, Richards & Comstock 3, NE SW 32-36n-65w. The company's Converse Sheep Company, SW SE 32-36n-65w, is nearing completion in the Lance Creek field. Operators are waiting on cement to set around the seven-inch production string landed at 3707 feet in the top of lower Sundance.

Central Wyoming

Another good well is expected for Ohio Oil Company and California Company on Big Medicine Bow field, Carbon County, Central Wyoming. Union Pacific-Account 1, NE SW SW 24-21n-

79w, is drilling in the second Sundance topped at 5317 feet. Operators failed to get an adequate drill stem test in the first Sundance at 5259-5300 feet. Same operators completed State 2, CNW NW 36-21n-79w, last week for 1325 barrels oil in 19 hours through the 2½-inch tubing and gauged 4,500,000 cubic feet of gas daily. It was plugged back from 5910 feet where water was encountered in the lower sand and completed in the first Sundance at 5474-5509 feet.

In the Rock River field, Carbon County, Ohio Oil Company's Harrison-Cooper 3, NWC S 35-20n-78w, an old well being deepened, is drilling at 3805 feet, while same company's Harrison-Cooper 10, SW SW 35-20n-78w, is still fishing for drill pipe at 3030 feet.

California Company's Holst 3, NE SW SE 13-17n-77w, on Quealy Dome, Albany County, is reaming at 1230 feet. This test is headed for the Sundance formation.

Northern Wyoming

One well is being abandoned in the northern Wyoming oil fields this week while an uneventful week is reported. W. S. Gilbert's Government 1, SE SE 35-29n-93w, on Lamb anticline gas field, Big Horn County, is being abandoned at 1143 feet. It has been shut down for the past several weeks with the 6⅝-inch casing underreamed to 998 feet and set. Water was encountered at 841-966 feet.

Arlt & Doyle have shut down Government 1, SW SW SE 29-48n-90w, in the Hidden Dome field, Washakie County, at 1115 feet. Christensen & Thorne's Government 2 NW SW SW 31-48n-90w, in the Hidden Dome field, Washakie County, is fishing for tools at 1400 feet. Rig burned down several weeks ago and new machinery has just been installed.

COLORADO

Casper, Wyo.—The California Company's State 1, CNE NW SE 6-11n-68w, a wildcat on the Round Butte structure, Larimer County, Colorado, just a few miles south of the Wyoming state line, developed a hole full of water in the Sundance at 1915-45 feet. Cores recovered between 1915-23 feet showed good oil saturation. Water developed in the Muddy at 1380-1450 feet, Dakota at 1550-1600 feet, and the Lakota at 1620-75 feet.

SHIPMENTS DOWN

Los Angeles.—Tanker shipments of all petroleum products from California to points outside of the California trade territory reached a total of 58,835,445 barrels during 1935, according to information gathered by the California office of the U. S. Bureau of Mines. The total 1935 tanker shipments compared to 68,190,804 barrels in 1934 and 58,931,331 barrels in 1933. The total in 1932 was 55,138,677 barrels and 60,770,336 barrels in 1931.

During 1935, total of 14,597,666 barrels of crude oil moved in tankers, practically all to Canada, with some going to Japan, and the total movement of gasoline was 16,457,711 barrels, while 15,068,382 barrels of fuel oils moved offshore in tankers.

Wildcat Interest

ARTESIA TEST SHOWINGS STIMULATE LEASE ACTIVITY

WEEKLY STAFF REPORT

Los Angeles.—Royalty Service Corporation's prospect hole in Section 16-24-18 is the outstanding wildcat venture now being drilled in the northwestern part of the San Joaquin Valley. Bottomed in the Temblor formation at 2006 feet, plugged to 1986 with 10¾-inch casing and standing cemented at 1887 feet, this project gives promise of developing a new producing horizon in Kings County.

Results of a conclusive test of the deep Eocene sands in the coastal area will be temporarily deferred because of the inability of Barnsdall Oil Company-Rio Grande Oil Company's Bell 12, to demonstrate anything but water on a recent open hole swabbing test. Located on the tidelands of the Elwood field, this test was drilled to 7157 feet and cemented 5¾-inch casing at 6725 feet. The point of entrance of water has been determined and operators will attempt to correct this difficulty before conducting further tests.

A leasing program of major importance is in progress among independent and major operators resulting from the favorable indications encountered in the drilling of the Engler & Long wildcat test, in Section 25-3-12, Artesia district. Bottom of the hole is 5888 feet, plugged to 5130 and 8⅝-inch casing is cemented at 4925 feet. A production test is scheduled for the latter part of this week.

J. E. O'Donnell's Bloemer-Jeppi 1, Section 17-30-29, midway between the Mountain View and Edison fields, total depth 5555 feet, plugged to 5495 feet, holds the center of interest with operators in this district. Although only an intermittent producer capable of 150 barrels a day, its isolated location designates it as having great possibilities in uncovering a new producing structure.

In the Mountain View field, two important completions were recorded during the past week. Ohio Oil Company's Derby 3, in Section 33-30-29 extreme southeast end of the field, was placed on production January 25, for an initial flow of 63 barrels a day of 63.4 gravity oil and 2,300,000 cubic feet of gas. Because of the abnormally high gas-oil ratio, the operators have been forced to shut in the well. Gasoline content of the gas is 0.78 gallons per 1000 cubic feet. In this same area, Hogan Petroleum Company is drilling Peters 1 at 3500 feet and North American Oil Consolidated is making hole at 4000 feet. Successful completion of one or both of these tests will extend the southeast limits of the field considerably.

Vesta Petroleum Company's Hopkins 9, eastern outpost well in the northwest area of the Mountain View field, Section 19-30-29, was completed January 24 for 300 barrels a day, 27.2 gravity, cutting 1.6 percent and 350,000 cubic feet of gas. The hole is 5243 feet deep, plugged to 5162 and 8⅝-inch casing was cemented at 4922 feet. Further drilling is being done in this section in order to definitely determine the extent of this off-shoot structure to the main Mountain View fault.

Kettleman Hills

In the North Dome area of Kettleman Hills, Standard Oil Company completed 67-1P, Section 1-22-17, for 1915 barrels of oil daily, 37.8 gravity, cut 6.5 percent, 75 pounds tubing pressure, 560 pounds casing pressure. The hole was drilled to 7610 feet, 9⅝-inch casing was cemented at 7088 feet and 552 feet of 6⅝-inch liner, perforated from 7605 to 7397 and 7270 to 7100 feet, was landed at 7605 feet.

The Middle Dome area of Kettleman Hills, inactive since Middle Dome Corporation's completion of 73-30V, Section 30-23-19, for 400 barrels of 60.0 gravity oil and 10,000,000 cubic feet of gas, again shows signs of life. Standard Oil Company, in No. 38-29V, Section 29-23-19, is rigging up rotary equip-

CALIFORNIA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
INGLEWOOD—		
Standard, K&I Rubel 23	2705	4020
DOMINGUEZ—		
Union, Callender 42	400	6654
HUNTINGTON BEACH—		
Woolner Oil Co., No. 4	125	4304
SANTA FE SPRINGS—		
Union, Bell 74	130	5441
VENICE—		
Union, Del Rey 12	915	6207
LOS ANGELES COUNTY—		
McAdams Explor. Co., Palos Verde 1	*	4496
COFFEE CANYON—		
Calif. Western Oil Co., No. 7-13	350	1530
EDISON—		
Jergins Trust-Hershey 2	400	1550
KERN FRONT—		
National Oil Co., Standard 4	150	1759
MIDWAY-SUNSET—		
General Pet. Corp., Midnorth 18	150	3704
Quality Oil Co., W. P. 1	80	1545
MOUNTAIN VIEW—		
Shell, Porter Two 3	2820	6063
Standard, Mullaney 3	1030	5170
Mullaney 4	675	5140
Vesta Pet. Co., Hopkins 9	350	5243
ROUND MOUNTAIN—		
Shell, Olcese 1-3	1375	1935
Olcese 1-4	4530	1860
KETTLEMAN HILLS—		
Standard, No. 67-1P	1915	7610
VENTURA AVENUE—		
Shell, Taylor 69	205	7104
MOUNT POSO—		
Ekoh Oil Co., Vedder 2	*	2023
KERN COUNTY—		
Speik Oil Co., Rionini 1	*	6120

*Failures; †Junked; ¶Million cu. ft. gas.

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ment to recondition and perhaps deepen to lower horizons. This well originally was drilled to 7885 feet and has been idle since last December, following an unsuccessful production test. The Middle Dome structure still remains wildcat territory as the exploration work to date has been insufficient to definitely define the producing limits of the field. However, nothing as spectacular as the North Dome pool is expected as the Middle Dome is regionally lower.

South Dome, although offering favorable structural conditions, has been productive of nothing but water.

In the Round Mountain field of Kern County, Shell Oil Company has completed two very good wells in the shallow Vedder sands. Olcese 1-3 was drilled to 1935 feet with 8⅝-inch casing cemented at 1734 feet and a 6⅝-inch liner, including 60 feet of perforations, landed at 1935 feet. The well was placed on the pump January 28 for an initial production of 1377 barrels a day, 18.1 gravity oil.

Olcese 7-4 has proved to be the most prolific producer drilled in this field. After cementing 8⅝-inch casing at 1804 feet, with the bottom of the hole at 1860 feet, the well came in out of control on January 17, for an estimated flow of 10,000 barrels a day. It was killed and officially completed on January 29 for 4529 barrels of 18.1 gravity clean oil with 60 pounds tubing pressure, 400 pounds casing pressure.

BIG KENTUCKY WELL

Sonora, Ky.—Indications are that the Sonora field may become the largest even opened in Kentucky. It is certain that there will be plenty of drilling when the weather is more favorable.

Last week, Duff, Bland and Porter, Sonora operators, completed their Jim Priddy 2, which is 5½ miles west of town, for a good well. It blew 25 feet over the derrick, and after capping flowed at the rate of 30 barrels per hour.

MICHIGAN

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
ANTRIM COUNTY—		
McClanahan Oil Co., Pearson 1, 31n-5w, nw nw sw-4	*	1500
ISABELLA COUNTY—		
J. C. Alder, Murphy 1, 14n-5w, nw nw sw-12	*	1400
MIDLAND COUNTY—		
Pure Oil Co., Reed-Alsup 1, 13n-2w, nw se-2	150	3433
Brehm & Hollman, McCann 1, 15n-2w, nw nw se-20	200	3104
MONTCALM COUNTY—		
Ide & Glavin, Wood 2, 12n-7w, c ne ne-10	¶23	1290
J. E. Evan, Duffield 1, 11n-5w, sw nw sw-25	*	3240
Isabella Oil Co., Strait C-1, 11n-5w, sw ne se-34	10	3210
NEWAYGO COUNTY—		
J. G. Buell, Smith 1, 14n-11w-29	*	3255
OSCEOLA COUNTY—		
L. B. Ayre, Bertz 1, 18n-7w, ne se ne-21	*	4100

*Failures; †Junked; ¶Million cu. ft. gas.

EASTERN FIELDS

EASTERN FIELDS WEEKLY STAFF REPORT

Completions

Company, Well and Location	Init. Prod. Bbls	Depth
OHIO		
ATHENS COUNTY—		
Carpenter & Glaizer, Smith 7	4	....
Lima Gas Corporation, Wilson 3	*	....
Ohio Fuel Gas Co., SC C C 126	*	3727
Leeper & Co., Cunningham 9	¶	858
Ellicott Corp., Pickett 3	3	1019
BELMONT COUNTY—		
Union Oil & Gas Co., Shelco 1	25	....
GUERNSEY COUNTY—		
Barry Rich Oil Co., Secrest 1	1	....
Ferguson & McCullough, Rich 1	1	....
MONROE COUNTY—		
Hines Bros. & Co., Hines 2	2	....
Robinson & Greene, Leasure 2	¶	....
Frank E. Young, Cline 1	*	....
PERRY COUNTY—		
Thistle Oil Co., Stotler 9	7	422
WASHINGTON COUNTY—		
George Pickens & Co., Adkins 12	3	1089
MEIGS COUNTY—		
Meigs Developing Co., Hoback 1	*	1921
Pearl Ash, Dixon 1	*	910
Stewart & Ross, Williams 4	¶	881
McKnight & Co., Miller 1	¶	880
Eliza Jividen, Goodfellows 8	¶	1965
Meigs Dev. Co., Ours & Co. 3	¶	2092
Hovis Oil & Gas Co., Ross 1	¶	2068
MEDINA COUNTY—		
H. Dempsey, Bochert 1	¶	3119
Ohio Fuel Gas Co., Schaffer 1	*	3323
SENECA COUNTY—		
M. E. Keaser, Russell 17	2	1260
HARDIN COUNTY—		
Robert Kirk, Wander 1	5	1332
RICHLAND COUNTY—		
J. B. Reed, McConkie 2	¶	3323
SUMMITT COUNTY—		
East Ohio Gas Co., Lamb 1	1	....
PUTNAM COUNTY—		
Brown & Co., Baker 1	10	1340
VINTON COUNTY—		
Ohio Fuel Gas Co., Reasoner 1	*	....
JACKSON COUNTY—		
Ohio Fuel Gas Co., Ratcliff 1	*	....
MUSKINGUM COUNTY—		
Mid East Gas Co., Bowman & Christy 1	¶	4505
PERRY COUNTY—		
Mid-East Gas Co., F. B. Wilson & Co. 1	¶	3139
MORGAN COUNTY—		
Choquill & Co., Greathouse 6	¶	1560
Burt & Son, Tuttle 14	1	468
KNOX COUNTY—		
McClay Bros., Boure 2	45	3065
Ohio Fuel Gas Co., Davis 1	*	2834
LICKING COUNTY—		
Wehrle Gas Co., Parker 1	¶	3350
E. H. Everett, Langstaff 1	295	3152
TUSCARAWAS COUNTY—		
Columbia Carbon Co., Schaar 1	¶	5058
STARK COUNTY—		
Ohio Fuel Gas Co., Double 1	¶	4351
WEST VIRGINIA		
RITCHIE COUNTY—		
Drake Oil & Gas Co., Drake Hrs. 2	¶	2047
N. H. Bickle, Miller 3	¶	1516
C. H. Rockwell, Butcher 3	¶	1846
South Penn Oil Co., Haught 2	¶	2502
J. W. Rowland, Benner 1	*	....
MARSHALL COUNTY—		
Guy D. Patterson, Davis 8	¶	1690
HARRISON COUNTY—		
W. Brent Mawell, Maxwell 33	¶	....
CALHOUN COUNTY—		
Mud Lick Oil & Gas Co., Flesher 3	¶	1810
Massie & Jarvis, Miller 1	¶	1723
McCall Drilling Co., Kerby 1	*	2602
H. S. Adams & Co., Ruby Smith 2	*	2100
FAYETTE COUNTY—		
Godfrey L. Cabot Inc., Kanawha 6	¶	2565
PLEASANTS COUNTY—		
Watson Oil Co., Satterfield 3	3	1784
ROANE COUNTY—		
Chas. W. Heasley & Co., Newman 1	4	....
BOONE COUNTY—		
O. B. Cunningham & Co., Dolan 1	¶	1054
RITCHIE COUNTY—		
W. H. Bickle, Holt Hrs. 1	¶	1547

*Failures; †Junked; ¶Million cu. ft. gas.

THE OIL WEEKLY REPORT ON IMPORTANT

Wildcat Tests

ALABAMA

FRANKLIN COUNTY — McAlpine et al's Hobson et al, 26-8s-14w, elev 559 ft, sd while co at 2589 ft, bad weather.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 1, nw sw 9-3n-29e, running 6-in csg after reported so & sg at 3438 ft (Tuscaloosa).

LAMAR COUNTY — DeSoto O&G Co.'s Gardner 1, 22-15s-16w, elev 503 ft, pb to 3118 ft, arr shoot csg and test 3118-35 ft, old td 4900 ft lime.

ARKANSAS

ARKANSAS COUNTY — Ark Oil Co.'s Fischer 3, ne nw 6-6s-4w, ru and sd.

CRAWFORD COUNTY — Trumbo et al's Craddock 1, c nw ne 3-11-30, rur.

COLUMBIA COUNTY — Southern States Gas Co.'s Pine Woods Lbr. Co. 1, ne nw 10-20-22, arr deepen 1904 ft.

HEMPSTEAD COUNTY—Dixie Drlg. Co.'s Vada Wheatley 1, nw sw ne 14-11-26, spud. May & Easton's Conway 1, sw nw sw 20-12s-27w, elev 290 ft, wocs 12½ in csg 80 ft. F. W. Martin's Lafferty 2, se nw 17-14-27, sd 1958 ft.

LA FAYETTE COUNTY—Earl F. Fox's Coleman 2, ne ne 30-16-24, elev 271 ft, top Nacatosh 1544 ft, sd 2826 ft. Erwin & Leach's Bodcaw Lbr. Co. 3, nw nw 20-16-23, elev 250 ft, 13⅜ in csg 330 ft, sd 2790 ft acct bad weather. Joe Modisett et al's Frost Lbr. Co. 1, (sec hole), sw sw 29-19-24, elev 261 ft, 9⅝ in csg 1960 ft, sd 2661 ft acct bad weather.

MILLER COUNTY—Odell Hinson's Montana Realty Co. 1, ne nw nw 3-17-28, rur. J. W. Jones et al's Bush 1, ne ne 2-19-27, mim. King Oil Corp.'s G. W. Crank 1, sw ne 19-16-25, sd cur titles 4000 ft. C. V. Lenz's Dale 6, 24-16-26, mim.

OUACHITA COUNTY—Griggsby & Aarnes' Burris 1, sw nw ne 19-15-19, elev 244 ft, coring 3295 ft. Phillips Pet. Co.'s J. D. Reynolds 1, se nw 17-15-15, 13⅜ in csg 619 ft, straightening crooked hole 1600 ft. W. B. Street's Rath & Cartier 1, sw sw ne 33-13-18, 7-in csg 1398 ft, co to deepen, td 1403 ft.

POINSETT COUNTY—Rockwell Dev. Co.'s W. A. Smith 2, ne ne 13-11n-3e, sd 2050 ft.

UNION COUNTY — F. C. Henderson's Sheppard 1, ne nw 35-17-15, elev 195 ft, top Nacatosh 2120 ft, 6-in csg 2115 ft, blg td 2192 ft. J. C. Buckbee, Tr.'s Sloan 2, se nw 14-17-15, wocs 10-in csg 150 ft.

CALIFORNIA

KERN COUNTY

BELRIDGE — Albert Beck's Beck-Bacon 1-35, 35-28-20, dr shale 1620 ft.

BUENA VISTA LAKE—Ohio's K.C.L. A-5, 13-31-26, td 4107 ft, to run formation tester.

COMANCHE POINT—Shell's Bank One 1, 15-32-29, sd 5394 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, sd 2182 ft.

DEVIL'S DEN—Cumberland Oil Co.'s Mabry 2, 17-26-28, dr dark brown shale sg 4390 ft.

EDISON—Navy Oil Co.'s Caravel 1, 19-30-30, td 1447 ft, pumping water, trace of oil.

FRUITVALE—Elliott Core Drlg. Co.'s Elliott 1, 14-29-27, dr gray sand 3950 ft. Mullane & Hall's Truesdell 1, 14-29-27, td 2804 ft, to deepen.

GRAPEVINE—Silver Gate Co.'s Tejon 1, 7-10-19, co 2985 ft.

GREENFIELD—Speik Oil Co.'s Ricomini 1, 23-30-27, abn 6120 ft.

KERNELL—Standard's Widgeon 3, 1-25-23, td 4130 ft, plug 3047 ft, redr to 3216 ft.

LOST HILLS—Standard's United 1, 2-26-20, td 5857 ft, fsh.

McKITTRICK—Belmac Drlg. Co.'s Douglas 1, 22-29-21, td 4800 ft, fsh.

MOUNT POSO—Stabeck & Gardner's Glide 1, 31-27-28, td 750 ft, co.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
b.s.—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg.—*fishing.*
ft—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper.*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so & g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

MOUNTAIN VIEW—Standard's Garcia 1, 13-30-28, dr shale 3978 ft.

NO. MOUNT POSO—H. McMann's No. 2, 27-26-28, rur. Recovery Oil Co.'s No. 3, 28-26-28, rig. Santa Carla Oil Co.'s Glide 1, 7-26-28, sd 900 ft. Vedder Pet. Corp.'s S. P. 1, 3-27-28, dr sand and shale 1074 ft.

RIO BRAVO—Ohio's No. 1, 1-30-25, rig.

SO. BUTTONWILLOW—General's No. 1, 5-30-24, td 5452 ft, co 4750 ft.

STEVENS AREA—Shell's K.C.L. 1, 29-30-26, dr sand and shale 2026 ft.

WHEELER RIDGE—Reserve O&G Co.'s Tejon 5, 2-10-19, rig.

MISCELLANEOUS

FRESNO COUNTY—Seaboard Oil Corp.'s Lillis-Welch 1, 30-16-14, grade. Jas. M. Conlon Co.'s No. 1, 30-19-15, coring shale 420 ft.

KINGS COUNTY—Commonwealth Consolidated Gas Co.'s No. 2, 21-22-20, dr sandy shale 2459 ft. Royalty Service Corp.'s No. 1, 16-24-18, td 2006 ft, in hard shell streaks shaley sand, plug 1986 ft, to set 10 in at 1885 ft. Standard's Tulare Farms 1, 34-24-23, rig. Union's Giannini 1, 28-22-20, dr shale 2430 ft.

MADERA COUNTY—Pure's Chowchilla 2, 8-10-14, td 5592 ft, replugging.

MERCED COUNTY—J. R. Murrell's No. 1, 8-10-9, dr 1300 ft in shale.

SAN JOAQUIN COUNTY—Amerada's F. D. L. 1, 15-2-5, dr sandy shale 4019 ft.

SAN LUIS OBISPO COUNTY—Emerich Oil Co.'s Holland 1, 22-32-22, td 1840 ft, flowing 30 bbls oil, to pump. Willett Oil Assn.'s Jack 2, 10-25-15, td 3647 ft, co. Geo. Moss' Pasa Robles 1, 27-26-13, rig. United Oil Co.'s No. 1, 2-32-21, rur. Birch Royer Oil Co.'s Patchett 1, 33-31-13, td 1453 ft, wocs 16 in at 1440 ft.

TEHAMA COUNTY — Northern Counties Pet. Co.'s Ewers-Mooney 1, 25-24-3, dr shale 6084 ft; hole caving.

TULARE COUNTY—Kenwood Pet. Corp.'s Kenwood 1, 14-24-27, dr sand 700 ft.

MONTEREY COUNTY—Shell's Branch 1, 34-24-10, dr black and brown shale streaks sand 7300 ft.

SANTA BARBARA COUNTY

CARPENTERIA—Santa Barbara O&G Co.'s Bryce 1, 29-4-25, sd 2100 ft.

LOMPOC—M. J. Freeman's La Brea 1, 11-7-33, sd 1450 ft. Lompoc Pet. Co.'s Beauterbaugh 2, 18-7-34, sd 3940 ft.

NO. MESA—Humphries et al's Edna May 1, 20-4-27, sd 1420 ft.

ORELLA—Williams & Brown's No. 1, 34-5-31, rig.

POINT CONCEPTION—Union's Sudden 1, 10-5-35, foundations.

SUMMERLAND—Marmonte Oil Co.'s No. 1, 16-4-26, sd 1600 ft.

VENTURA COUNTY

BARDSDALE—Bestco Pet. Co.'s Fry 1, 2-3-19, rur. Duke Oil Corp.'s No. 1, 7-3-19, td 2000 ft, waiting for casing. El Rancho Oil Co.'s Elkins 1, 9-3-19, dr red shale and shells 1234 ft. Laying & Jacobs' No. 1, dr shale 1224 ft. Union Oil Co.'s Dryden 10, 12-3-20, td 5758 ft, ran 351 ft 4¾ in liner including perforated landed at 5754 ft, tested good for 140 bbls 20 gravity oil in 22 hrs.

OJAI—Continental's Pirie 2, 12-4-23, td 1017 ft, co.

OXNARD—General's McGrath 2, 26-2-23, grading.

PADRE CANYON—Continental's Hobson 1, 15-3-24, dr sand and shale so 5402 ft.

PIRU—Bolsa Chica's Snow 3, 4-4-18, dr brown shale 311 ft.

SANTA PAULA — High Mesa Oil Co.'s Butcher 1, 16-4-22, sd 650 ft.

SHIELLS CANYON — Bankline Oil Co.'s Calumet B-2, 3-3-19, td 3674 ft. Set formation tester 3604-3646 ft and 3639-3674 ft, all oil, no water, to set casing. Texas Co.'s Shiell's 129, 4-3-19, dr hard sandy shale 1629 ft.

SIMI—Dawson Oil Co.'s No. 1, 8-2-17, dr blue shale 2224 ft. Jas. S. Hull's No. 1, 2-2-18, td 1490 ft, rep machinery. Paloma Oil Co.'s Paloma Marr 1, 12-2-18, sd 2806 ft.

SO. MOUNTAIN—Calco Pet. Corp.'s Calco 3, 17-3-20, dr sand and shale.

VENTURA—Ventura Explor. Co.'s Sexton 1, 30-3-22, sd 7068 ft.

SOUTHERN CALIFORNIA

ARTESIA—Engler & Long's Millard 1, 25-3-12, td 5888 ft, plug 5130 ft, wocs 8⅝ in at 4925 ft.

CARBON CANYON—Tehama Pet. Corp.'s Kramer 1, 33-2-8, td 3053 ft, bailing.

DOMINGUEZ—West American Oil Co.'s Del Amo 1, 3-4-13, td 5310 ft, r.

EL SEGUNDO—L. J. Marvin's Woods 1, td 6359 ft, rur to dr deeper.

HUNTINGTON BEACH—20th Century Oil Co.'s Calnan 1, 36-5-11, td 5118 ft, co to 3100 ft, showing o&g on ditch.

KRAEMER—T. W. Cooke Drlg. & Service Co.'s Cooke 1, 25-3-9, td 2657 ft, pumping 40 bbls, 19 gravity oil, cut 24 percent. Leaseholders Dev. Co.'s Vejar 1, 26-3-9, sd 4110 ft. Standard's Yorba Com. 1, 36-3-9, td 8766 ft, redr. 2255 ft.

LAWNDALE — Sovereign Oil Corp.'s Ben Long 1, 22-3-14, td 8766 ft, co to bottom to test.

NEWHALL—Yant Pet. Corp.'s No. 5, 1-3-16, dr shale 1455 ft.

NEWPORT—Commander Oil Co.'s Mesa 1, 29-6-10, sd 600 ft.

NO. LONG BEACH—Geo. L. Clayton's No. 1, 31-3-12, td 6765 ft, wocs 4½ in at 4700 ft.

PICO CANYON—N. M. Fraser's No. 1, 31-4-16, td 955 ft, pumping water.

PUENTE—Chas. R. Butler's Butler 1, 14-2-10, dr hard brown shale 2957 ft, 40 percent oil sand 2506 to 2730 ft.

TOPANGA CANYON—Monarch Pet. Co.'s Sylvia Park 1, 5-1-16, td 650 ft, co.

TORRANCE—Eyer Pet. Corp.'s No. 1, 20-4-13, sd 3100 ft. Oliver McDowell No. 1, 35-3-14, sd 4633 ft. Pioneer Holding Co.'s Pioneer 1, 33-3-14, sd 4317 ft.

PLAYA DEL REY—Eastern Oil Co.'s Del Rey Land & Water Co. 1, 22-2-15, dr hard shale 2989 ft.

WEST LONG BEACH—Shell's Amebco 1, 13-4-13, dr sand 5310 ft.

WILMINGTON—McAdams Explor. Co.'s Palos Verde 1, 31-4-13, abn 4496 ft.

YORBA LINDA — Continental's Carlton Com. 1, 21-3-9, dr sand streaks shale 1295 ft.

RIVERSIDE COUNTY—Albert Pet. Co.'s Watt 2, 23-7-3, td 2785 ft, plug 2200 ft, trying to locate water. Fred E. Stevens' Everett 1, 27-3-7, rur.

SAN BERNARDINO COUNTY—Equitable Pet. Explor. Co.'s No. 1, 11-10-5, td 1999 ft, ran formation tester zone 1922-1998 ft, colors on ditch.

FLORIDA

JACKSON COUNTY — Mrs Mamie Hammonds et al's Grandberry 1, sw ne 15-5n-9w, dk and mir.

HILLSBOROUGH COUNTY — Southern Pet. Co.'s Mizell & Williams 1, se ne 4-32s-21e, dr 2715 ft.

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 1, se se 17-24s-25e, 9⅝ in csg 2200 ft, tested water 2258 ft, coring below 2350 ft.

KANSAS

BARTON COUNTY—Torrey & Feaster et al's Kempler 1, se ne ne 31-18s-11w, ur 5-in csg 3441 ft. Yarnell, Carlson & Spencer's Bloomer 1, ne ne nw 36-17s-11w, rng 6-in csg 3080 ft. Morgan & Flynn et al's Amerine 1, ne ne ne 14-19s-14w, dr 2375 ft. Morgan & Flynn et al's Zimmer 1, se se sw 30-19s-14w, dr 625 ft. Buchanan & Alexander's Langford 1, ne ne sw 14-20s-11w, dr 548 ft. Geo. W. Hinkle's Smith 1, sw nw nw 1-17s-11w, ru. Roy Ramsey et al's Hunt 1, nw nw nw 10-18s-11w, lcn. Earl Wakefield & T. O. C. Johnson's Summ 1, sw sw ne 22-19s-12w, mim.

BUTLER COUNTY — Pryor & Lockhart's Boucher 1, nw nw nw 19-17s-4e, dr 1315 ft. National Ref. Co.'s McCullough 1, ne ne sw 1-28s-6e, dr 2790 ft.

COWLEY COUNTY—Aylward, Trees Oil Co. et al's Shields 1, sw sw sw 17-32s-6e, sd 1928 ft. Roth & Farout's Sherwood 1, ne nw sw 11-31s-4e, dr 2625 ft. Penwest's Clover 1, ne se se 8-31s-7e, dr 2251 ft. Reed & Milligan's Houston 1, nw nw sw 10-31s-4e, dr 2425 ft. Winkler-Koch et al's Harlan 1-B, cs½ nw ne 13-31s-7e, sd 2550 ft. Earl Wakefield's Wilson 1, nw nw nw 4-32s-3e, ru. Shawver et al's Wilson 1, ne se ne 11-30s-4e, lcn.

ELLIS COUNTY — Parrish & Denman's Walter 1, se sw se 14-13s-17w, lcn.

ELLSWORTH COUNTY — Smith-Ash & Phillips Pet. Co.'s Splitter 1, sw sw sw 19-17s-9w, br.

GRAHAM COUNTY—Vickers Pet. Co. et al's Hutton 1, ne ne se 29-8s-22w, sd 1375 ft.

GREENWOOD COUNTY — Mohawk Oil Co.'s Edgar 1-A, ne ne sw 2-28s-8e, 1000 gals acid, no test. Anderson & McGinnis' Jensen 1, se se sw 30-23s-12e, td 1890 ft, D&A. N. C. Dunn's Dawson 1, cnw ne 27-26s-13e, sd 925 ft. Hale & Reese's Needles 1, ne sw nw 12-25s-10e, rig.

HARPER COUNTY—Marathon Oil Co.'s Zellers 1, csw nw 17-35s-8w, dr 4600 ft.

HARVEY COUNTY—Ok-Tex et al's Osborne 1, cse se 6-23s-3w, sd 3679 ft. Empire O&R Co.'s Webster 1, se se sw 8-24s-2w, co 90 ft. Harburney Oil Co.'s Schrag 1, nw nw se 24-22s-3w, co 587 ft.

HASKELL COUNTY—Helmerich & Payne's Elliott 1, csw ¼ 30-29s-33w, td 2747 ft, prod 2½M ft gas comp. Helmerich & Payne et al's Larson 1, cse ¼ 28-28s-33w, rig.

KEARNEY COUNTY—Meyers et al's Beaty 1, cne ¼ 28-25s-36w, rig.

MARION COUNTY—Milton et al's Young 1, nw nw se 17-21s-3e, ru.

NORTON COUNTY—Lario O&G Co. & Elwell's Kennedy 1, sw sw nw 22-3s-23w, ur 10-in csg 2740 ft. Helmerich & Payne et al's Collins 1, cne ¼ 11-3s-25w, dr 1385 ft.

PRATT COUNTY—Skelly Oil et al's Gilchrist 1, cse ¼ 7-28s-11w, td 4935 ft, pb 4245 ft, prod 15M ft gas, comp. Lario, Elwell & Atlantic's Lemon 1, se se nw 12-29s-13w, dr 2440 ft.

RENO COUNTY—McPherson Drlg. Co. & Derby Oil Co.'s Schuechzer 1, ne se sw 17-23s-4w, td 3382 ft, no test. Rose Spring Drlg. Co. & Foarker's Brauer 1, sw sw se 4-26s-4w, dr 4082 ft. Darby Oil Co.'s Schrock 1, se se sw 27-24s-5w, dr 3951 ft.

RICE COUNTY—Permian Oil Co.'s Conner 1, cne ne 28-19s-7w, td 3640 ft, pb 3210 ft, testing. Skiles et al's Edwards 1, nw nw ne 3-18s-8w, td 3281 ft, pumped 661 bbls oil, to acidize. Day's Mason 1, nw ne ne 26-21s-7w, td 3400 ft, testing. Vernen O&G Co. & Cusco Oil Co.'s Boldt 1, nw sw nw 10-19s-10w, sd 2585 ft. Gratton et al's Williams 1, sw sw nw 17-18s-7w, rng 15-in csg 260 ft. Franco-Central et al's Shonyo 1, sw sw ne 11-18s-10w, td 3356 ft, D&A. Continental & Empire's Nickel 1, ne sw sw 13-18s-8w, br. Tabor-Coleman & Atlantic's Tharp 1, cnw nw 33-21s-6w, sd 4097 ft. Duwe & Schneider's Wright 1, ne ne ne 36-21s-7w, spd.

ROOKS COUNTY—Gillespie & Son's Low 1, ne ne nw 12-6s-18w, td 3162 ft, pumped 60 bbls oil. Murfin et al's Wasthusin 1, ne ne se 12-6s-18w, dr 970 ft. Pryor & Lockhart's Bradley 1, sw sw ne 31-10s-16w, dr 1510 ft.

RUSSELL COUNTY—Phillips Pet. Co. & Sinclair Prairie's Driscoll 1, nw nw se 31-15s-11w, dr 3281 ft. Coraleana Oil Co.'s Diskon 1, se se se 30-15s-13w, fsg 3000 ft. Warren Pet. Co.'s Bratton 1, se se se 25-11s-13w, dr 3175 ft. Central Pet. Co.'s Benso 1, se se sw 9-14s-15w, td 3091 ft, 300 ft oih, no test. Sam Murphy et al's Enochutz 1, sw sw sw 10-15s-13w, sd 2565 ft. Hartman & Blair's Boxberger 1, nw nw sw 32-13s-14w, dr 2350 ft. Eisenhour & Shaffer's Humes 1, sw sw sw 6-14s-12w, rig. Torrant's Williamson 1, se se nw 9-14s-14w, td 2550 ft. Reynolds' Fredrickson 1, se sw se 6-13s-12w, sd 500 ft. Empire et al's Major 1, se se se 11-14s-12w, ru. Bridgeport Machine Co. & Lauck's Wyckoff 1, se nw ne 27-11s-13w, dr 85 ft. Chas. Newbold's Krug 1, se sw se 4-15s-14w, mim. John McCole et al's Roth 1, nw nw sw 21-16s-18w, cellar.

SEDGWICK COUNTY — T. C. Johnson's Jensen 1, sw sw nw 11-28s-2e, ru.

STAFFORD COUNTY—Herndon Drlg. Co. et al's Russell 1, cse nw 20-21s-14w, ur 5-in csg 3788 ft. Farris et al's Snyder 1, se se nw 3-21s-11w, dr 1670 ft.

SUMNER COUNTY — Helmerich-Payne's Wright 1, se se nw 10-33s-2e, rust 3495 ft. Husted et al's Evers 1, se se ne 27-31s-2e, sd 200 ft. Morgan et al's Veail 1, se sw ne 27-32s-2e, dr 1670 ft.

TREGO COUNTY—Vickers Pet. Co. et al's Secor 1, nw nw nw 25-15s-24w, sd 4726 ft. Central Commercial's Wagg 1, nw nw se 17-13s-21w, co 3665 ft. Continental Oil Co.'s Cave 1, ne se nw 26-11s-23w, lcn.

WOODSON COUNTY—Morgan et al's Vermont Savings Bank 1, ne nw ne 15-25s-14e, dr 1535 ft. Sheedy et al's Warner 2, sw sw sw 21-25s-14e, td 1470 ft, est 12 bbls oil. Lewis et al's Riggs 1, sw sw sw 10-26s-14e, sd 900 ft.

SOUTH LOUISIANA

ACADIA PARISH—Superior's M. Savoy 1, Bayou Mallet prospect, sec 47-7s-1e, dr shale 6589 ft.

CALCASIEU PARISH—Fred Oil Co.'s Faist 1, sec 26-8s-10w, reaming to bottom at 4025 ft. A. G. Oliphant's Calcasieu National Bank 1, Nibbletts Bluff prospect, sec 23-10s-12w, mim. Union Sulphur Co.'s Prairie Farms 2, South Lake Charles prospect, sec 2-11s-9w, dr shale 5398 ft.

CAMERON PARISH — Magnolia's Miama Cooperation Co. 1, Willow Lake prospect, sec 32-12s-8w, woc 2220 ft.

EVANGELINE PARISH—Basile Oil Co.'s Hirsch 1, sec 14-6s-2w, reaming at 7534 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Pigneur 274, Jefferson Lake prospect, sec 12s-5e, woc 8347 ft.

JEFFERSON DAVIS PARISH—Shell's Lacassine 1, Haynes prospect, sec 20-11s-5w, sd 9238 ft.

ST. BERNARD PARISH — Emerald Pet. Co.'s Shell Beach Properties 1, Shell Beach prospect, sec 31-13s-15e, dr shale 5678 ft.

ST. JAMES PARISH—Shell's Colonial Sugar Inc. 1, Convent prospect, sec 5-12s-5e, woc 2481 ft.

ST. MARTIN PARISH — Texas Co.'s St. Martin Land Co. 8, Henderson prospect, sec 9-8s-7e, dr shale 2099 ft.

TERREBONNE PARISH — Shell's Realty Co. 1, Houma Townsite prospect, sec 103-17s-17e, no report.

VERNON PARISH—Llano Cooperative Oil Corp.'s Llano F, sec 7-1n-9w, dr shale 2610 ft.

WEST FELICIANA PARISH — Southern Minerals Corp.'s M. B. Wood 1, 10 mi nw of St. Francisville, sec 54-1s-4w, dr shale 1052 ft.

NORTH LOUISIANA

BIENVILLE PARISH—DeSoto O&G Co.'s Mower 1, ne ne 9-16n-10w, spd and sd 975 ft. Gulf Ref. Co.'s W. T. Thiasher 1, sw sw 13-15n-7w, mim. Lide & Greer's Davis Lbr. Co. 1, ne se 12-16n-5w, top Wilcox 575 ft, top Nacatosh 2395 ft, top hd chalk 2528 ft, 10-in csg 2586 ft, top Blossom 2792 ft, coring sw sand (Blossom) 3075 ft. Texas-Seaboard Oil Co.'s McGee 1, sw ne 3-16n-6w, elev 217 ft, top Arkadelphia 1980 ft, 10¾ in csg 2299 ft, dr 4640 ft shale.

BOSSIER PARISH—L. R. Baker et al's Bulkley 1, ne sw 36-21n-13w, dr 1810 ft, sandy lime. Producers O&G Co.'s E. C. Edwards 1, se sw 27-18n-11w, fsg 980 ft.

CADDO PARISH — Pyramid Oil Co.'s Wheeler A-1, 16-18-16, mim.

CLAIBORNE PARISH—E. T. Oakes et al's Patton Est. 1, ne ne 1-20n-5w, curing titles, td 4238 ft. Ryan Oil Corp.'s Gladney 1, ne sw 27-20n-7w, elev 343 ft, anhydrite 4485-4960 ft, arr deepen 5007 ft. Sugar Creek Synd et al's Darrett 2, 31-21-5w, sr to set 10-in csg at 5500 ft, td 5660 ft sandy lime.

DE SOTO PARISH—Alexander et al's Stell 1, 5-12n-16w, running 7-in csg to 4500 ft, td 4902 ft. V. T. Bolin et al's Gamble 1, nw se 26-13n-15w, dk. A. G. Halbach's Staten 1, 32-13-14, dr 3195 ft.

JACKSON PARISH—Caldwell L&T Co.'s Burroughs Est. 1, ne nw 1-17n-1w, rur. G. W. Zeigen's La. Cent. Lbr. Co. 3, 26-14n-1w, sd 865 ft.

LA SALLE PARISH—H. L. Hunt, Inc.'s La. Cent. Lbr. Co. 1, 33-10n-3e, mim.

LINCOLN PARISH—Caldwell L&T Co.'s Hammons 1, nw ne nw 30-18n-1w, rur. Lide & Greer's T. L. James Co. 1, 9-17n-4w, ru and sd. S. Gardner 1, 10-17n-4w, dr 2040 ft bro sandy lime.

MOREHOUSE PARISH—Henry E. Rondeau et al's Clark 1, sec 10-20n-7e, dk.

UNION PARISH—Lent, Bocher & Sears' Frost Lbr. Co. 1, nec 27-21n-1e, mim.

WEBSTER PARISH—Ohio Oil Co.'s R. L. Holloway 6, ne sw 23-21n-10w, 15¾ in csg 560 ft, dr 5225 ft. J. L. Edwards' Hooper 1, nw sw 8-17n-9w, sd 1260 ft.

WINN PARISH—P. E. Parsons et al's Tremont Lbr. Co. 1, nw sw 10-12n-2e, elev 209.4 ft, top Wilcox 1280 ft, Midway 2825-3470 ft, dr 3635 ft lime.

MICHIGAN

ALCONA COUNTY—Thalman and Morris' Kohlman 1, 26n-7e-10, sd 2330 ft.

CLINTON COUNTY—Stork Oil Co.'s Bross 1, 8n-2w-29, lcn.

EATON COUNTY — Burris and Keeler's Moon 1, 2n-4w-11, rig.

GRATIOT COUNTY — Harley Williams' Smith 1, 9n-2w-29, sp. Mountain Oil and Gas Co.'s Walters 1, 11n-2w-17, dr 900 ft.

HURON COUNTY — Wallace Markle's Opaka 1, 15n-11e-4, fsg 2700 ft.

IONIA COUNTY—Wittmer Oil Co.'s Kimball 1, 7n-5w-15, sd 2550 ft. Associated Petroleum Co.'s Retensdorf 1, 7n-8w-8, dr 2300 ft.

LENAWEE COUNTY — Socony-Vacuum's McCarberry 1, 5s-5e-36, shot 160 qts n-g, testing oil show, 2550 ft, Trenton lime. Mott and Denman's Huffman 1, 6s-3e-26, dr 300 ft.

MASON COUNTY—Northern Development's Burke 1, 17n-15w, sw se nw-26, lcn. Max Prey's Barcthy 1, 17n-15w-29, dr 2600 ft. Dragoon Dev.'s Young 1, 17n-15w-15, sd 2500 ft.

MECOSTA COUNTY—Taggart Brother's McKeough 1, 14n-9w-2, dr 3900 ft.

MONTCALM COUNTY—Jetter Oil Co.'s McCracken 1, 9n-5w-6, sp. Old Dutch Oil Co.'s Hansen 1, 10n-7w-21, sd 1500 ft.

SAGINAW COUNTY — Mid State Dev.'s Burlson 1, 10n-5e-21, rig. Pure Oil Co.'s Blumer 1, 12n-1e-10, sp. Henry McEvoy's Jenacki 1, 12n-2w-31, sp.

TUSCOLA COUNTY—Bancroft Oil Co.'s Humes 1, 11n-8e-21, rig.

MISSISSIPPI

HARRISON COUNTY—Big Ridge Oil Co.'s Hingin 1, sw se se 13-7s-10w, dr 2105 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Fox 2, 31-7n-12w, dk.

LAMAR COUNTY—Snow-Black Pet. Co.'s Miller et al 1, ne ne sw 3-4n-15w, dk.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 3, 14-14n-1e, dr plug 6⅝ in csg 3105 ft, blg, td 3110 ft.

WILKINSON COUNTY—Chas. Green, Tr.'s Foster Creek Lbr. Co. 1, nw se se 8-3n-1e, dr 3080 ft.

WINSTON COUNTY—Jack Vale's Moody 1, sw nw sw 3-13n-14e, elev 540 ft, 6-in csg 2216 ft, sd 2806 ft acct bad weather.

NEW MEXICO

LEA COUNTY—Barnsdall Oil Co. et al's D. C. Hardy 1, c se ne 29-21s-37e, elev 3470 ft, dr 3110 ft. Amerada's State 1-K, c se nw 29-19s-37e, elev 3617 ft, dr 2530 ft. Amon G. Carter and Crafton Oil Co.'s M. A. Hair-Humble 1, c sw nw 11-24s-37e, elev 3231 ft, top anhydrite 990 ft, top salt 1220 ft, run cas to test so&g in sandy-lime 3630-38 ft. Gypsy Oil Co.'s Annie L. Christmas 1, c se se 27-22s-36e, elev 3521 ft, dr 2800 ft. Harry Leonard et al's B. T. Lanehart-Humble 1, c sw ne 21-25s-37e, elev 3079 ft, dr 475 ft. Maljamar O&G Corp.'s Baish 6, c nw se 21-17s-32e, Maljamar area, dr 920 ft. Ohio Oil Co.'s State 1, c sw se 30-19s-37e, Monument area, lcn. Repollo Oil Co.'s J. R. Phillips 1, swc 31-19s-37e, Monument area, elev 3585 ft, completed flowed 255 bbls oil 5 hrs via one-inch choke, pay 3800-3899 ft; J. H. Williams 1, nec 33-19s-37e, Monument area, elev 3587 ft, base salt 2530 ft, rust, td 3800 ft. Skelly Oil Co.'s W. H. King 1, c ne sw 6-23s-37e, elev 3382 ft, showing oil and gas, dr 3625 ft; J. U. Baker 1, c se sw 22-22s-37e, elev 3348 ft, dr 500 ft; R. R. Simms 1, c se se 4-23s-37e, elev 3306 ft, dr 800 ft; Hugh O. Simms 1 c sw ne 4-23s-37e, elev 3323 ft, dr 3500 ft; Edgar L. Steeler 1, c nw ne 17-23s-37e, elev 3333 ft, missed sandy-lime pay, shows sul water, dr 3730 ft; B. L. King 1, c sw se 32-22s-37e, elev 3369 ft, dr 750 ft. Skelly et al's B. F. Harrison 1, c nw sw 5-23s-37e, elev 3352 ft, pb fr sul w in lime 3796 ft to 3762 ft, shot 870 qts nitro 3491-3754 ft, flows by heads, co with rotary. The Texas Co.'s J. M. Dean-Pure 1, c se sw 28-22s-36e, elev 3498 ft, top anhydrite 1330 ft, cored oil saturation in lime and sandy-lime 3640-3810 ft, tested dry after acid and shot with nitro, sd 3922 ft. Warren L. Todd, Inc.'s Lemon 1, c nw se 17-21s-32e, dr 275 ft. Sam K. Vierson & Brown's W. B. Robinson 1, c nw se 14-11s-32e, elev 4355 ft, top anhydrite 1474 ft, top salt 1506 ft, top brown lime 3465 ft, cem 7-in cas 3680 ft, dr 4517 ft.

OKLAHOMA

ALFALFA COUNTY—Tex-O-Kan's Acre 1, csw ne 14-24n-11w, sd 3709 ft.

ATOKA COUNTY—Vierson et al's Williams 1, ne sw nw 34-2s-10e, dr 3749 ft.

BEAVER COUNTY—Anderson-Kerr et al's Davis 1, csw se 36-5n-26 ECM, dr 6330 ft.

BECKHAM COUNTY—Wood Pet. & Royalty Corp.'s Blair 1, nw nw se 32-9n-26w, dr 1255 ft.

CADDO COUNTY—Denver P&R Co.'s Sah-Cam 1, cse se 33-10n-10w, td 9850 ft, wo liner. Turner et al's Sapin 1, ne ne sw 1-5n-11w, sd 3440 ft.

CARTER COUNTY — The Texas Co.'s Cathey 1, se ne ne 6-5s-1w, dr plugs. Carter Oil Co.'s Humble-Williams 1, sw ne sw 27-2s-3w, dr 6992 ft. Southern States Oil Co.'s Moore 1, ne se nw 30-4s-1w, dr 375 ft. Schermerhorn Oil Co.'s Floyd Clowdus 1, nw nw ne 2-4s-2w, dr 740 ft.

COAL COUNTY—Carter Oil Co. et al's Thompson 1, csl ne nw 34-2n-9e, dr 7060 ft. Southern Oil Co.'s Fish 1, sw sw sw 6-1s-8e, td 1575 ft, D & A. Shell Pet. Corp.'s Hills 3, se se nw 30-3n-10e, dr 2465 ft.

COMANCHE COUNTY—George Pace et al's Spencer 1, sw sw sw 21-3n-10w, recemented hole from 1853 to 1684 ft, wocs. John Nicholas' Hauseholder 1, ne ne sw 8-2n-10w, rng 5 3/16-in csg 960 ft. J. Phillips' Head 1, cn½ nw sw 29-4n-11w, ru mach. Mieling's Miller 1, ne ne sw 23-4n-12w, dr 530 ft.

GARFIELD COUNTY—Sherry et al's Hoken 1, nw nw sw 32-20n-4w, dr 3085 ft.

GARVIN COUNTY—Suggett & McElreath's Hyre 1, ne ne se 23-3n-1w, dr 2555 ft.

GRANT COUNTY—Southern Oil Co. et al's Allen 1, sw sw se 36-26n-4w, fsg 5476 ft.

HUGHES COUNTY — Schumacher et al's Schumacher 1, ne nw ne 23-5n-10e, dr 1610 ft. Halsey's Eastep 1, nw nw sw 11-8n-9e, 6-in dr pipe cemented, wocs. Canavan's Meadors 1, ne se sw 5-8n-10e, sd 2812 ft.

JACKSON COUNTY—Universal Oil Co.'s Briscoe 1, nw sw ne 36-1s-20w, dr 910 ft. Jackman's Fee 1, sw sw sw 27-1s-24w, dr 1325 ft.

JEFFERSON COUNTY—Heydrick's Seay 1, se nw nw 31-6s-5w, sd 1737 ft. Sinclair Prairie's Barrett 1, nw nw nw 31-5s-6w, woc at 268 ft. Campbell's Trout 1, se ne ne 6-8s-7e, sd 1300 ft.

KAY COUNTY — Black Gold Pet. Co.'s Cooley 1, ne nw sw 25-28n-4e, td 710 ft.

KIOWA COUNTY—Beeler & Klein's Van-Kirk 1, ne ne sw 35-7n-15w, sd 607 ft. Burns & Moore's Webster 1, cne ne 2-6n-17w, ru 8¼-in csg 458 ft, no test. Shaffer et al's Slusher 1, nw sw nw 35-7n-17w, lcn.

LE FLORE COUNTY—McGraw et al's Tidwell 1, cnw se 17-3n-22e, rng 12-in csg.

LINCOLN COUNTY — Stanolind-Amerada's Crawford 1, ne ne se 35-15n-2e, td 5229 ft, est 15 M ft gas. The Texas Co.'s Andrew 1, nw ne se 28-14n-5e, dr 4100 ft. Fred McDuff's Jacob 1, ne ne se 10-15n-5e, dr 360 ft.

LOGAN COUNTY — Stanolind-Amerada & Eason's Gragg 1, sw sw ne 20-18n-4w, dr 5865 ft. Spring Rose Drlg. Co. et al's Wright 1, sw sw nw 32-15n-1e, pipe stuck 5622 ft.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6n-2w, dr in new hole 5837 ft. Amerada & Stanolind's Westheimer & Daube 1, sw se sw 27-6s-2w, sd 5000 ft. Russell et al's Scott 1, sw se sw 29-8s-2e, rur.

MARSHALL COUNTY—Singley's Vickers 1, nw sw nw 22-7s-4e, sd 245 ft. Singley et al's Halford 1, sw se sw sw 22-7s-4e, sd 400 ft. Smith's Chestnut 1, ne ne ne 23-8s-5e, dr 300 ft. Stennette et al's Lidecker 1, se se nw 7-8s-6e, dr 275 ft.

McCLAIN COUNTY—Arab Pet. Corp.'s Autry 1, nw nw nw 16-7n-3w, dr 6570 ft.

McINTOSH COUNTY—I.T.I.O. Co.'s Toncred 1, sw sw ne 9-9n-14e, set 8-in csg 3048 ft, dr 3072 ft.

MURRAY COUNTY — Hernsby & Jones' Sadler 1, ne ne nw 20-1n-2e, sd 1680 ft.

OKFUSKEE COUNTY—Sherry's Washington 1, sw sw ne 21-13n-7e, test with 1000 gals acid, est 1/20 M ft gas, sd. Grisso's Dalton 1, se se se 36-10n-8e, rur.

OKLAHOMA COUNTY—Sinclair Prairie's Corbett 1, ne nw ne 17-13n-3w, dr 6402 ft. Mid-Continent Pet. Corp.'s Dahl 1, ne ne nw 8-13n-3w, td 7033 ft, D & A. Sinclair Prairie's Heavey 1, ne ne nw 17-13n-3w, dr 6408 ft.

PAYNE COUNTY—Pierce's Kihega 1, sw sw sw 7-17n-1e, cellar.

PONTOTOC COUNTY — Gypsy Oil Co.'s Emry 1, sw sw ne 15-2n-6e, dr 5742 ft. Delaney et al's Hillsdale 1, se se ne 35-4n-6e, td 2045 ft, D & A. Pioneer O&G Co.'s Bayne 1, se sw sw 16-5n-6e, pb 2760 ft, pumped 7 bbls oil. Mid-Texas Pet. Co.'s Harbet 1, sw sw se 30-5n-4e, spd & sd.

POTTAWATOMIE COUNTY — Magnolia Pet. Co.'s Devault 1, sw nw se 22-6n-4e, dr 2650 ft.

ROGER MILLS COUNTY—Anderson & Kerr et al's Teeter 1, cse se 2-17n-25w, dr 6340 ft.

SEMINOLE COUNTY—Felmlee & Nichaelson's Belford 1, se nw ne 15-9n-8e, dr 1617 ft. Wood Oil and Dirickson's Ellis 1, nw ne ne 36-9n-5e, woc at 52 ft.

STEPHENS COUNTY—Clyde Rhodes et al's Doak 1-A, sw sw sw 1-1s-5w, dr 400 ft.

TILLMAN COUNTY — Gypsy Oil Co.'s Schenck 1, se nw se 31-1s-16w, sd 2970 ft.

WASHITA COUNTY—McWhirter et al's Fee 1, sw sw sw 34-8n-19w, sd 1347 ft.

EAST TEXAS

ANDERSON COUNTY—Burke Bros. et al's S. G. Moore 1 (36.3-ac), J. C. Rosson sur, Camp Hill area, mim. Sun Oil Co.'s Carl Rosson 1 (110-ac), W. T. Davis sur, Camp Hill area, elev 567 ft, Pecan chalk 3877-4219 ft, base Austin chalk 5043 ft, top Sub-Clarksville sand 5058 ft, completed flowed 223 bbls 39½° oil 24 hrs one-quarter-inch choke, TP 450 lbs, CP 825 lbs, td 5073 ft; Rosson 2, rig. Tide Water & Seaboard Oil Corp.'s M. J. Reagan 1 (214.8-ac), John Adams sur, Long Lake area, dr 3300 ft; Shaw & Cern 5 (1216-ac), Daniel Parker sur, Long Lake area, rig. Standard Oil Co. (Kan.'s) B. Hombs-Robinson 2 (57½-ac), John Adams sur, Long Lake area, lcn. Comer E. Todd et al's W. T. Todd 1 (100-ac), A. B. Patton sur, Boggy Creek field, dr 1410 ft.

CASS COUNTY — American Liberty Oil Co.'s J. B. Rodgers 1 (167.95-ac), C. M. Robinson sur, Rodessa area, elev 238 ft, top Hill sand 5737 ft, pb fr 7010 ft to 6057 ft, perf cas and gauged 3,000,000 ft gas on ¼-in choke, no water. R. W. Norton, Tr.'s Mary Rives 1 (85-ac), John Collum sur, w Rodessa field, elev 277 ft, chalk 1895-2485 ft, top Red Beds 3394 ft, fish 5839 ft; Rives 2, lcn. T. H. McElvain et al's C. M. Beckett 1 (7.62-ac), John Collum sur, w Rodessa field, lcn. United Production Corp.'s J. R. Jones 1 (70-ac), B. J. Murray sur, west Rodessa area, rig; J. R. Jones 2, lcn.

COLLIN COUNTY—Port Bolivar Oil & Ref. Co.'s Clarkston-O. G. Durning 1-A (140-ac), Wm. Creager sur, Pat. No. 1193, elev 722 ft, sd 3866 ft; J. Shirley 1-A, James Sorrell

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sur, Pat. No. 3609, (first hole junked at 1963 ft), sd for rotary.

DELTA COUNTY—Delta O&G Co.'s J. H. McKinney 1 (59-ac), Lavina Hampton sur, 3 mi nw Cooper, elev 530 ft, top Blossom sand 1108 ft, top Georgetown lime 2872 ft, sd 2995 ft.

FREESTONE COUNTY—J. P. Haley & C. F. W. Young's Jack Eppes 1 (18-ac), David Bullock sur, 8½ mi se Teague, elev 471 ft, top Pecan chalk 2965 ft, Austin chalk 3761-4270 ft, sd to test Woodbine sand 4556-4561 ft.

GREGG COUNTY—Millard Oil Co. (was O. T. Clark et al's) T. G. Williams 1 (100-ac), David Hill sur, three mi ne Longview, elev 426 ft, Pecan chalk 2391-2985 ft, dr Georgetown lime 3820 ft.

GRAYSON COUNTY—Olson Drlg. Co. et al's SW Life Insurance Co. 1 (160-ac), J. C. Jamison sur, A-865, 3 mi n Pottsboro, elev 767 ft, Trinity series fr surface to 850 ft, Springer shale 850-1240 ft, Mississippian Caney shale 1240-4308 ft, fine grained sand 4308-4482 ft (with odor o&g 4441-82 ft), chert 4482-4637 ft, top Woodford shale 4637 ft, lost dp 4670 ft, pb to 3535 ft. Port Bolivar Oil & Ref. Co.'s Creed Taylor 1 (160-ac), J. Fitzhugh sur, 3 mi se Gunter, sd 3931 ft.

HENDERSON COUNTY—W. McDougal et al's E. Price 1 (216-ac), M. Mathews sur, lcn. L. V. Marmar et al's I. W. Brown 1 (183¼-ac), R. H. Pearson sur, nw Cayuga, dk. Sparks et al's Theo. E. Berry 1 (167.8-ac), Aaron York sur No. 847, 5 mi s Brownsboro, mim and sd. H. M. Wilson et al's fee 1 (943-ac), Thomas Caro sur, 5 mi n Malakoff, elev 359 ft, dr 2810 ft.

KAUFMAN COUNTY—C. C. Pearson et al's G. W. Martin 1 (100-ac), W. F. C. Butler sur, elev 429 ft, Austin chalk 1940-2200 ft, sd 2402 ft.

LAMAR COUNTY — Bruce Bros. et al's Chas. Price 1, Wm. Nelson sur, 1 mi w Trout, elev 484 ft, sd 326 ft. North Texas Synd.'s D. M. Haynes 1, J. R. Craddock sur, 2½ mi nw Emerson, mim. Portland Oil Co.'s J. M. Johnson 1 (96-ac), Luke Roberts sur, 1 mi w Deport, sp and sd.

LIMESTONE COUNTY—David J. Crawford et al's Mrs. R. P. Ward 1 (28-ac), Pedro Varella sur, elev 509 ft, completed as 5 bbl pumper, td 3001 ft; Ward 2, elev 508 ft, top Woodbine sand pay 2985 ft, td 2997 ft, pb to 2991 ft, tested sw, dry and abd. C. F. Lytle et al's J. L. Thompson 1-T (141-ac) Pedro Varella sur, w Mexia field Trinity test, dr 415 ft. Money Oil Co.'s Bill Rosson 1, blk 4, Pedro Varella sur, old Nigger Creek area, lcn.

MORRIS COUNTY—Ray Cotuck, Inc.'s P. M. Staggers 3 (40-ac), J. D. Nelson sur, rig. Steve J. Rotundi et al's W. & C. Smith 1 (50-ac), M. C. Vela sur, 2½ mi sw Naples, top Navarro chalk 2258 ft, sd 3830 ft.

NAVARRO COUNTY—E. M. Thomason & Co.'s Estes Bros. 1 (58-ac), blk 11, Wm. Gilbert sur, 1 mi e Roane, sd 1255 ft. Peyton Bros.' J. F. Rushing 1 (12½-ac), Henry Ford sur, 3 mi w Currie, top soft Austin chalk 2112 ft, hard chalk 2131-2515 ft, top Woodbine sand 2821 ft, top Buda lime 3020 ft, dry and abd 3060 ft.

RAINS COUNTY—W. A. Allen, Geo. W. McClung et al's Ida Bullard 1 (75-ac), Nancy Brantley sur, 2 mi sw Emory, sp and sd.

RED RIVER COUNTY—J. S. Abercrombie Co. & Harrison Oil Co.'s T. L. Knight 1 (231-ac), Robt. Hill sur, 13 mi n Clarksville, dr 500 ft. Annona O&G Co.'s Leo & Otto Roberts 1 (200-ac), James Bankston sur, 2 mi ne Annona, sd 160 ft. Mid-West Pet. Co. et al's Hocker-Hughes 1 (160-ac), M. E. P. & P. Ry. sur, lcn. Garson & Seigel's W. T. Morris 1 (351-ac), Joseph Guest sur, 1 mi s Detroit, elev 478 ft, sd 825 ft.

RUSK COUNTY—McCallum et al's E. C. Gary 1 (265-ac), John Piburn sur, 5 mi s Henderson, dk. J. W. Shipman et al's Citizen's Nat'l Bank (L. T. Burton) 1-A (125-ac), J. J. Y'Barbo sur, 4 mi ne Henderson, elev 432 ft, sd 3295 ft.

SMITH COUNTY — W. L. Cloud et al's Dora Kendall 1-A, John Williams sur, 3 mi e Van field, sp and sd. Frank D. Staples et al's Luther Hale 1 (115-ac), T. C. Williams sur, 3½ mi nw Arp, elev 504 ft, sp and sd. Winona Oil Corp.'s McClung 1 (23½-ac), E. Newberry sur, 1 mi e Winona, sd 1165 ft. Merrick Drlg. Co.'s W. P. Rushing 3 (50.8-ac), Jacob Herrin sur, 2 mi e Whitehouse, dr 2610 ft.

TITUS COUNTY—C. N. Housh, Thompson & Bob Peveto's C. M. Carr 1 (108-ac), (north) M. V. Delgado sur, 1½ mi e Talco, elev 370 ft, Pecan chalk 1611-1788 ft, top soft Austin chalk 3011 ft, top hard chalk 3032 ft, top Woodbine series 3436 ft, top Georgetown lime 3960 ft, sd 4205 ft. Stephen J. Rotondi et al's O. C. Lillenstern 1 (40-ac), W. H. Crawford sur, 5 mi se Talco, elev 301 ft, dk. C. M. Joiner et al's Huernich Hrs. 1, W. G. Banks sur, dk.

WOOD COUNTY—Gulf Prod. Co.'s C. D. McCollum (Stone) 1 (39.6-ac), Joseph Simpkins sur, ¼ mi s Alba, elev 456 ft, Pecan chalk 2370-2612 ft, Austin chalk 3700-3928 ft, trace oil 3956-60 ft, top Woodbine series 4381 ft, top sand 4389 ft, top Red Beds 4457 ft, dr sandy-shale 4805 ft.

SHELBY COUNTY—O. D. Clark, Dev. Co.'s C. H. Herton 1, J. Dowlin sur, dk. Farley & Sommers' W. C. Windham 1, Wm. Leach sur, rur. C. A. Parker et al's W. C. Windham 1, A. H. English sur, dr 3240 ft. H. A. Stebbinger et al's Pickering Lbr. Co. 1, C. F. Henry sur, tested sw 3050 ft, top Georgetown 3085 ft, dr 3402 ft, lime. Tarbud Oil Co.'s Pickering Lbr. Co. 1, W. D. Woodfin sur, cemtd 7-in csg 4690 ft, bailed sw at td 5160 ft, cemtd plug 4700 ft, perf csg 3345-95 ft, arr test.

WEST TEXAS

ANDREWS COUNTY—Fuhrman Pet. Corp.'s W. H. Boner 3-B, nw¼ sec 25, blk A-43, PSL sur, dr 1560 ft. Humble's J. S. Means 7, c se sw sec 2, blk A-35, PSL sur, top anhydrite 1846 ft, top salt 1895 ft, dr 2560 ft. J. W. Tripplehorn et al's A. R. King 2, nec n½ nw¼ sec 11, blk A-46, PSL sur, dr 1630 ft.

BORDEN COUNTY — C. Ed. Hyde and Hugh White's W. L. Miller 1, c nw¼ sec 28, blk 33, T&P Ry. sur, T-4-N, dr 2560 ft.

BREWSTER COUNTY — Floyd C. Dodson et al's Texas American Synd. 1-A, c ne ne sec 66, blk 10, GH&SA Ry. sur, deep test, elev 4228 ft, jkd 1715 ft, skid rig, sp and sd. G. H. Storey et al's Jim P. Wilson 1, c se nw sec 3, blk 212, T&St.L. Ry sur, sd 1875 ft.

CONCHO COUNTY — Maverick Oil Co.'s Jim Rice 1, sec 18, H&TC Ry. sur, elev 1887 ft, sd 1501 ft. John W. Westbrook Co.'s C. C. Ledbetter 1, sec 2, A-1673, blk 65, H&TC Ry. sur, elev 2000 ft, dr 2000 ft.

CRANE COUNTY — Big Basin Pet. Co.'s Jax Cowden 1, nec nw ne sec 77, blk "X", sd 2135 ft. Clark-Cooper & Smith's A. P. Jorden 1, nec 160-ac lse, sec 12, PSL sur, blk B-22, lcn. A. R. Eppenauer and A. H. Livingston's fee 1, sec 13, blk 6, H&TC Ry. sur, lcn for Ordovician lime test. D. J. Finley and A. W. Cherry's E. S. Hughes-Conoco 1, ne¼ sec 2, J. A. Prater sur, dr 420 ft. A. H. Flaherty et al's E. S. Hughes-Texas Co. 1, sec 4, GC&SF Ry. sur A-781, elev 2467 ft, top lime 1945 ft, run cas to test so&g, td 2076 ft. Gulf's W. N. Waddell et al 1, c nw nw sec 4, blk B-27, PSL sur, elev 2554 ft, top salt 510 ft, top Simpson lime 5980 ft, top Ellenberger 6316 ft, tested sul w 6450 ft, pb to 6317 ft, shot 440 qts 6186-6300 ft and 140 qts 5979-6050 ft, run tubing to complete. Loffland Bros. et al's J. B. Tubb-Gulf 1, c nw¼ sec 9, blk B-27, PSL sur, elev 2540 ft, top anhydrite 428 ft, salt series 495-1285 ft, top brown lime 2478 ft, td 4510 ft, td 4510 ft to dd. Humble O&R Co.'s J. B. Tubb 1, near c nw nw sec 11, blk B-27, PSL sur, elev 2557 ft, top anhydrite 450 ft, top salt 520 ft, fsh 2403 ft. John I. Moore et al's T. C. Barnsley 1, c sw sec 43, blk 32, PSL sur, Ordovician lime test, lcn. Sinclair Prairie and unit members' J. B. Tubb-California Co. 1, sec sec 3, blk B-27, PSL sur, elev 2540 ft, dr 2515 ft.

CROCKETT COUNTY—J. W. Dieringer, B. C. Mann & E. M. Wahlenmaier's J. W. Robbins 1, sec 2, blk B, GC&SF Ry. sur A-5498, sp and sd. Dr. J. G. Harris et al's O. W. Parker 1, sec 83, blk 1, I&GN Ry. sur, elev 2215 ft, sd 1750 ft. John I. Moore et al's A. C. Hoover 1, sec sec 4, blk "FF", B&B sur, sp and sd.

CULBERSON COUNTY—Anderson-Prichard Prod. Corp.'s H. A. Borders 1, nw¼ sec 34, blk 249, GB&CNG Ry. sur, elev 4565 ft, shows gas 4537 ft, sul w in lime 4739-50 ft, td 4780 ft, sd to run cas.

JEFF DAVIS COUNTY—C. M. "Dad" Joiner et al's Jones-Coffield 1, ne¼ sec 8, blk 3, H&TC Ry. sur, sd with show dead oil, td 2112 ft.

ECTOR COUNTY—Crafton Oil Co.'s E. F. Cowden 1, swc sec 19, blk 43, T&P Ry. sur, T-2-S, Harper area, elev 2995 ft, top anhydrite 1580 ft, salt series 1610-2670 ft, top Yates sand 2735 ft, top brown lime 3785 ft, dry and abd in sul w 4352-4365 ft. Barnsdall Oil Co. et al's Foster 2, c sw sw sec 18, blk 43, T-2-S, rig. W. H. Dunning, Jr. et al's C. Scharbauer 1, sec sw¼ sec 33, blk 44, T&P Ry. sur, T-1-N, elev 3100 ft, top anhydrite 1360 ft, salt series 1390-2475 ft, top Yates sand 2590 ft, mudding off big gas flow, td 4058 ft. Gulf's C. A. Goldsmith-Scharbauer 2, sec ne¼ sec 15, blk 44, T-1-S, elev 3100 ft, top anhydrite 1360 ft, salt series 1390-2475 ft, top Yates sand 2583 ft, dr by junk, td 3972 ft; Goldsmith-Scharbauer 3, ne¼ sec 27, rust, td 1530 ft. Phillips Pet. Co.-Pure Oil Co.'s E. F. Cowden 3, nw¼ sec 26, blk 44, T&P Ry. sur, T-1-S, elev 3119 ft, top anhydrite 1640 ft, lime pay 4173-4182 ft, flowed 550 bbls oil natural. Stanolind's J. E. Witcher 1, c ne ne sec 24, blk 43, T&P Ry. Sur, T-2-S, dr 2315 ft.

EL PASO COUNTY—A. M. Blume et al's F. W. Cook 1, ne½ sec 321, S. F. No. 8134, sd 560 ft. Tri-State Oil Co.'s Chas. & L. M. Kinkel 1, nec sec 237, S. F. No. 7232, co 1750 ft.

FISHER COUNTY—L. A. Daniel and J. B. Rhoads' Mrs. J. R. Nickless 1, nwc 81-ac lse, G. W. Lawrence sur, elev 1912 ft, temp abd, td 685 ft. Forest Development Corp.'s A. M. Dry 1, near c sw se sec 108, blk 2, H&TC Ry. sur, cem sur cas. Tide Water and Merry Bros. & Perini, Inc.'s M. Howard 2, nec sw ne sec 180, blk 2, H&TC Ry. sur, elev 1853 ft, pumped 362 bbls initial fr lime 3645-3667½ ft after acid.

GAINES COUNTY—Landreth Prod. Corp. et al's W. H. Kirk 1, c ne se sec 22, blk A-21, PSL sur, lcn. E. M. Wahlenmaier-York & Harper, Inc.'s E. H. Jones-Humble 1, c sw sw sec 414, blk G, CCSD&RGNG Ry. sur, elev 3528 ft, top anhydrite 2171 ft, top salt series 2290 ft, dr 5035 ft. W. T. Walsh and Harry Adams Corp.'s S. J. Averitt 1, nec ne ne sec 228, blk G, W. T. Ry. sur, elev 3322 ft, top anhydrite 1969 ft, top salt 2030 ft, show gas 2785-95 ft, top Yates sand 2920 ft, cased off junk, dr 3555 ft.

GARZA COUNTY—Danciger Oil & Refineries, Inc.'s V. A. Hartman 1, sec 1401, E. L. RR. sur A-294, lcn. Grisham-Hunter Corp's J. R. Sullivan 1, swc se¼ sec 3, blk 5, S. E. Harper and K. Aycock sur, elev 2493 ft, dry and abd in sul w 3007 ft. M. L. Richards et al's Post 1, nec se ne sec 6, blk 5, Aycock sur, sd 1955 ft.

GLASSCOCK COUNTY—Loffland Bros., John I. Moore et al's L. S. McDowell 1, c se ne sec 22, blk 34, T&P Ry. sur, T-2-S, elev 2534 ft, top lime 2137 ft, top Crinoidal lime 9471 ft, used 6000 gals acid in Pennsylvanian lime 10,115 ft, top white lime 10,186 ft, dr 10,495 ft.

TOM GREEN COUNTY—Eugene Mays et al's Ike Funk 1, c nw sw sec 38, blk 5, H&TC Ry. sur, elev 2361 ft, so 1043-47 ft, pb fr sul wa at 1454 ft to 1035 ft, testing after using acid. J. P. Williams & L. L. Ingraham's J. W. Johnston 1, se part 160-ac lse, D. Chandler sur, lcn.

HOWARD COUNTY—Superior Oil Co.'s D. W. Logan 1, c nw se sec 34, blk 31, T&P Ry. sur, T-1-N, elev 2485 ft, top anhydrite 995 ft, top salt 1025 ft, top lime 2425 ft, sul w 3240-45 ft, dry and abd 3375 ft.

HUDSPETH COUNTY—Haymon Krupp Oil & Land Co.'s S. J. Thaxton 1, near sec ne se sec 34, blk 74, T&P Ry. sur, Tsp 6, dr 310 ft.

JONES COUNTY—I. N. DeMont et al's L. G. Roberts 1, J. Gasner sur, dry and abd, td 2015 ft. Bob Elmore et al's O. L. Caton 1, sw¼ sec 10, D&DA Lands sur, cem cas 1135 ft. S. C. Herring et al's C. L. Cowsart 1 (160-ac), sec 42, O. A. L. sur, dr 1700 ft. Hal Hughes et al's R. D. Bumpass 1, (70-ac lse), T. Maltby sur, elev 1551 dr 1550 ft. W. H. Peckham & Danciger Oil & Refineries, Inc.'s Stamford 1, sec 207, BBB&C Ry. sur, elev 1605 ft, completed 210 bbls on pump from sand 1936-37 ft. Jamison, Pollard & Forster's G. B. Triplett 1, J. Goocher sur, dr 2120 ft. Reliance Oil & Roy. Co.'s Ida Crow 1, se¼ sec 9, D&DA Land sur, dry and abd td 2147 ft.

LOVING COUNTY—Porter Rankin et al's W. D. Johnson 1, nw¼ sec 12, blk 57, T&P Ry. sur Tsp 1, elev 2904 ft, sd 2933 ft.

MARTIN COUNTY—Woodley Pet. Co.-Kirby Pet. Co. & Boone Bros.' F. A. King 1, nwc sw¼ sec 30, blk 35, T&P Ry. sur, T-1-S, sp. Benedum-Trees et al (was Wm. Hix's) O. B. Holt 1 (5000-ac), League 319, Garza County School Land sur, lcn.

MENARD COUNTY — Wilcox O&G Co.'s Lee Murchison 1, swc sec 158, abst 1840, elev 2190 ft, sd 410 ft.

MITCHELL COUNTY — Lockhart & Co.'s W. C. Berry 1, nec nw¼ sec 80, blk 97, H&TC Ry. sur, elev 2232 ft, oil saturated lime 1716-36 ft, td 1802 ft, dry and abd, td 1802 ft. Southern Union Gas Co.'s Costin 1, sec sec 11, blk 28, T&P Ry. sur, T-1-S, sp and sd.

NOLAND COUNTY—N. B. Hall, A. Glenn et al's Georgia Tech 1, sw¼ sec 89, blk 24, T&P Ry. sur, elev 2330 ft, sd 190 ft. David Thomas, Ridgeway et al's Mrs. G. W. Cochran 1, ne¼ sec 113, blk 1, H&TC Ry. sur, lcn.

PECOS COUNTY—Cardinal Oil Co.'s White-Baker-Gulf 1, nec sec 44, blk Z, HE&WT-TC Ry. sur, dr 970 ft. Dobbs Oil Co.'s J. M. Rooney 1, near c ne ne sec 12, blk 125, T&St.L. Ry. sur, sp. C. W. Richards et al's W. Courtney-Pryor 4, c nw nw sec 78, blk OW, T. M. Ry. sur, elev 2967 ft, jkd and abd, td 1126 ft. Stanley A. Thompson et al's Elsinore Cattle Co. 1, lcn for Ordovician test. Tex-Mex Pet. Corp.'s E. T. Brandenburg 1, sec se¼ n½ sec 42, blk 8, H&GN Ry. sur, dr 2150 ft. Trans-Texas Oil Co.'s Popham Land & Cattle Co. 1, se¼ sec 235, blk 2, GH&SA Ry. sur, sp and sd; C. M. Caldwell 1, sec sec 27, blk 50, T&P Ry. sur, Tsp 9, so&g 3075 ft, sd 5156 ft in Delaware lime.

REEVES COUNTY—R. W. Clark and Washington Oil Co.'s Radford 1, sec 39, blk 56, PSL sur, elev 3169 ft, sd 502 ft.

RUNNELS COUNTY — Melrose Oil Co.'s Mrs. L. P. Wood 1, nwc 30-ac lse, Willett Holmes sur No. 100, sd 2858 ft.

SCHLEICHER COUNTY — Cardinal Oil

Co.'s J. A. Whitten 1, c ne nw sec 35, blk L, TC Ry. sur, dr 455 ft. Mangus Oil Corp. (was W. C. Proctor et al's) Judkins-Spencer (Pure) 1, c sw¼ sec 4, GC&SF Ry. sur blk V-28, or Hooper-Wade sur, blk A, elev 2209 ft, dr 4060 ft.

SCURRY COUNTY — Coffield & Guthrie, Inc.'s W. A. Wade 1, nwc sec 115, blk 97, H&TC Ry. sur, elev 2306 ft, pb fr 3168 to 1900 ft, testing. J. G. Bristow & R. H. Cantrell's Shannon-Magnolia 1, c nw¼ sec 331, blk 97, H&TC Ry. sur, bad hole, td 330 ft.

TAYLOR COUNTY—Hightower Oil & Ref. Co. (was H. M. Imholz et al's) Mrs. E. E. Sadler 1 (475-ac), sec 31, C. Cole sur, co 2195 ft.

TERRELL COUNTY—F. C. Bates and J. H. Felps' J. H. Felps 1, sec nw¼ sec 5, G. W. Turley sur, blk A-4, elev 2185 ft, sd 5606 ft.

TERRY COUNTY — Danube Oil Corp.'s Brownfield 1, c se¼ sec 23, blk T, D&W sur, lcn.

UPTON COUNTY—Greencliff Oil Corp.'s J. H. Tippett-Halff 1, c ne¼ sec 58, blk Y, TC Ry. sur, elev 2648 ft, top anhydrite 1254 ft, top salt 1312 ft, dr 1355 ft. John W. Emch & Shell's Mrs. A. E. Gordon 1, ne¼ sec 47, blk y, T. C. Ry. sur, dr 455 ft. J. G. McKenzie et al's W. H. & L. M. Taylor 1, sec ne se sec 22, blk B-2, GC&SF Ry. sur, sd 630 ft.

WINKLER COUNTY—Crafton Oil Co. et al's J. B. Walton-Pure 2, swc ne¼ sec 1, blk B-3, PSL sur, lcn. The Falcon Co.'s Keystone-Humble 1, swc se¼ sec 15, blk B-2, PSL sur, lcn. Gulf's E. R. Hill 1, swc se¼ sec 9, blk B-11, PSL sur, elev 2809 ft, top anhydrite 845 ft, salt series 1065-2355 ft, top brown lime 2415 ft, dr 3105 ft; Keystone 10, nec se¼ sec 10, blk B-3, PSL sur, elev 2954 ft, tested 330 bbls 33.4° gravity oil and 61 bbls water, td 3576 ft, sd to plug back; Keystone 11, swc se¼ sec 10, blk B-3, PSL sur, top salt 1189 ft, making gas, dr 3070 ft. R. H. Henderson et al's W. A. McCutcheon-Conoco 1, nec sw¼ sec 16, blk B-3, PSL sur, sp and sd; Central State Bank 1, lcn. Fred Hyer et al (was Mascho's) Cowden Cattle Co. 1, c nw¼ sec 8, blk A-56, PSL sur, dr 785 ft. Wilson Keys and A. W. Cherry's Abilene Cent'l State Bank-Conoco 1, nwc ne¼ sec 25, blk 26, PSL sur, sp and sd. Humble & Tide Water's Walton 1-D, sec sec 20, blk 74, PSL sur, rig; Walton 1-C, swc se¼ sec 21, blk 74, PSL sur, rig. C. M. Joiner et al's Cowden-R. M. Evans 1, near c nw¼ sec 47, blk 73, PSL sur, sd 1080 ft. K. D. Oil Co.'s Pink Mitchell 1, nwc s½ ne¼ sec 23, blk B-10, PSL sur, dk. Magnolia's J. B. Walton-State 1, nwc ne¼ se¼ sec 7, blk B-3, PSL sur, elev 2921 ft, top anhydrite 735 ft, top brown lime 2309 ft, show gas 3087-88 ft, dr 3110 ft. Joe C. Maxwell and Siosi Oil Co.'s J. B. Walton-State 1, nwc sw¼ sec 27, blk B-3, PSL sur, rig. Sinclair Prairie's J. B. Walton 1, nec ne¼ sec 20, blk 77, PSL sur, rig. Tom Sloan, Frank E. Lewis et al's John Sealy 1, c se¼ sec 72, blk A, GMMB&A sur, lcn. Sun Oil Co.'s Keystone 1, sec sec 3, blk 77, PSL sur, rig. Superior O&G Co.'s M. J. Hill 1, sec e½sw¼ sec 18, blk 11, PSL sur, rig. Wahlenmaier Pet. Corp. & Atlantic O. P. Co.'s J. B. Walton-Humble 1, sec sw¼ sec 34, blk 74, PSL sur, rig.

YOAKUM COUNTY—Honolulu Oil Corp.-C. J. "Red" Davidson et al's L. P. Bennett-TP Coal & Oil Co. 1, c ne ne sec 678, blk "D", John H. Gibson sur, elev 3557 ft, top anhydrite 2424 ft, top salt 2535 ft, top Yates sand 3220 ft, top lime pay 5088-5090 ft, sd with hfo. Lou G. Stogner et al's Goggins-Roosevelt 1, c ne¼ sec 215, blk D, John H. Gibson sur, lcn.

SOUTH TEXAS

ARANSAS COUNTY — Buckingham Oil Co.'s McCampbell 1, lots 8 and 9, sec 41; lots 8 and 9, sec 42, McCampbell Subd., James Crick survey, 2 miles nw of Aransas Pass, San Patricio County line, set 300 ft sur csg, woc.

ATASCOSA COUNTY—R. C. Lee, Trustee (Atascosa Trust), U. A. Doumch 1, 152-ac tr, blk 10, J. T. Russell sur No. 1222, 3 miles n Poteet, resume dr at 1300 ft. R. McIntyre's San Antonio Joint Stock and Land Bank (H. A. Billinck) 1, J. B. Woodleff sur No. 246, 7½ mi e Coughran, dr 2200 ft. L. L. Motes, Trustee's Atascosa Co. Subd 1, 425-ac tr, John McNeil sur No. 1191, sd 724 ft for rock bit.

BASTROP COUNTY — Franklin et al's Langlen 1, 1000 ft nwl, 300 ft nel of tr, in Standifer sur sw of Elgin, dk. Peterman's Hemphill 1, 150 ft swl and nwl of tr in Bymar sur, dr 2250 ft. A. W. Phillips' Vaughn Lumber Co. 1, 1110-ac tr, F. Sartuche sur No. 10, 5 mi ne Bastrop, sd 54 ft.

BEE COUNTY—Geo. M. Church's Webb-Hearn 1, in 92-ac lease, E. Ryan sur, 2000 ft se disc well Beeville field, cleared hole 5935 ft, set 7 inch casing to bottom, dr plugs and perf 5900-14 ft; G. A. Ray 1, Anna Burk sur, 2 mi e Beeville, sd 692 ft. H. A. Pressey's R. T. Hicks 1, 1120-ac tr, Jose M. Uranga gr, ab 668, 4½ mi s of Normana, ru. G. M. Richardson et al's Mengers 1, center w 100-ac of W. R. Ryan 500-ac tr, Wm. Allen sur, near Tynan, pits dug to move in rig about 2-15-36.

BEXAR COUNTY — American Gas Co.'s Oliver No. 5, 400-ac tr M. F. Rodriguez sur, Gas Ridge, td 2996 ft, set 6⅝ csg 2250 ft, bad cement job, recementing. Tom Anderson's C. J. Krause 1, sp and sd. Carter & Ingersoll's Louis Mann 1, 60-ac tr, John Christopher sur, 3 mi s Von Ormy, dr 785 ft, carrying 8¼ inch csg. Cherokee Drilling Co.'s T. A. Chapman 1, 1004-ac tr in A. J. Leslie sur, 6 miles sw of San Antonio, td 767 ft, ru new rotary. Crouch & Shadrock's W. Kohler 1, spud and ru. Joe Deupree's R. S. Coffey 1-A, F. Rodriquez sur, 7 mi s San Antonio, dr 1130 ft. Wm. H. Russell 1, 723-ac tr, Fernando Rodriguez sur, 9 mi ne San Antonio, td 1001 ft, set 6⅝ in csg 980 ft, bailing. H. J. Moore's Mrs. Lena Eisenhauer 1, 80-ac tr in Gertrude Rodriguez sur, 9 mi ne of San Antonio, sd 350 ft. O. M. Owensby's Minna Coreth 1, 284.04 ac tr, Adam Stafford sur No. 49, near Eckert field, dr 1050 ft in chalk. H. A. Pagenkopf's Chas. Rittiman 1, 100-ac tr, J. Chappal sur, 12 mi ne San Antonio, near Kirby, top Edwards lime 1110 ft, dr 1467 ft. F. M. Shaver's A. W. Bitter 1, J. M. Baerrera sur, near McDonna, sd 881 ft; A. W. Bitter 2, J. M. Baerrera sur, partly ru and sd. H. B. Schumacher's Hilda Gillette 1, 49-ac tr in M. G. de Alamiz sur No. 20 and 7 mi south of San Antonio, sp with spudder.

BLANCO COUNTY—R. T. Rowe & W. E. Nixon's Polk Morrisey 3, 222-ac tr, Thomas Webb sur No. 91, 3 mi e of Blanco, dr 155 ft.

BROOKS COUNTY — California Co.'s B. Garcia 1, tr No. 3, Las Mestina de Gonzalina gr, Alta Mesa dist, fsh for ds 3262 ft. Dick Young et al's Singer 1, ne¼ se¼ sec 312, cored sand 632-35 ft, dst show 320 ft sul w, no pressure.

BURLESON COUNTY — Walter Blumenthal's G. V. Crain 1, W. C. Pearce sur, ab 297, 1 mi fr Milam County line, coring 3262 ft.

CALDWELL COUNTY—Pat Armstrong et al's No. 1 N. Dunlap Est., 431-ac Farm in S. Seal sur, sd 21 ft. Detroit-Texas Dev. Co.'s W. P. Dunlap 3-A, S. F. Sanders sur, Dunlap area, sd 2390 ft. J. J. Elam et al's Francis-Brown-Cochran 1, W. F. Young sur, 5 mi e of Luling, sd 27 ft for orders. Exploration Dev. Co.'s (Fred Meyer) W. R. Eibaud 1, 57-ac tr, S. Seal sur, Dunlap area, dk. Joe Graham's Martindale 1, e of Staples, sd 450 ft. W. C. Jening's McMahon 1, James Pinchback sur, se of Lockhart, resume dr at 150 ft. Marts & Beavan's J. J. Jolley 1, E. Pettus sur, midway between Lockhart and Lytton Springs, dr 1510 ft. McNeil Pet. Corp.'s C. A. Lackey 1, 1½ mi sw Dale, sp. Ogden & Reed Oil Co.'s R. B. Vickery 2, 550 ft sel, 150 ft nel 100-ac tr in S. Damon survey, 2 mi se of Dale, lcn. Fred G. Scott's E. P. Dunavent 1, 4 mi se San Marcos, sd 135 ft. Sterling & Wilson's M. L. Strawn 1, Pablo Martinez sur, at Lytton Springs townsite, mir. M. R. Tinkle et al's Arnold 1, S. Seal sur, Dunlap area, lcn.

CALHOUN COUNTY — Continental's Am. Nat'l Realty Co. (Moody) 2-A (3), sec 6, blk C. P. Garcia sur, 9 mi se Seadrift, td 8040 ft, made two cores through csg shoe, still in shale, mill out bit to dr ahead with 5¼ in csg. Plymout and Humble's Mrs. E. Welder 1, Gardner Smith sur, ½ mi w Heyser, N. Green Lake, dr 5585 ft.

CAMERON COUNTY—W. T. Daniels & King-Woods Oil Co.'s Port Isabel Co. 1, center lot 17, shares 29, 30 and 31, Buena Vista gr, 6 mi north Bayview, sp and sd, wor.

DE WITT COUNTY — Hill Brothers & Koontze's Riedel 1, 535.5-ac tr, J. Santos sur (6 mi se of Yorktown) sp. Universal Oil and Glaspie's Schubel 1, C. Fitzgerald sur, ab 2 mi nw Yoakum, sd 425 ft.

DUVAL COUNTY—J. H. Chandler's Rita S. de Pena, Pena tr, sh 4, Mesquite gr, sand 2808-24 ft, sandy-shale 2824-32 ft, oil odor, sd for orders 2832 ft. Continental's Sevier 7-A, sec 52, Santa Rosalia gr, D&A 3435 ft; Sevier 8-A, 2000 ft n of No. 5. Charles Daubert et al's D. F. Kreis 1, sec 518, 6 mi e Loma Novia, dr 1220 ft. Frank J. Gravis et al's Gravis et al 1, sec 250, 9 mi w San Diego, reaming 3312 ft sand 3308-12 ft, dst 15 min, show 27 fourbles sw. Howard Pet. Corp.'s G. Ruiz 1, sec 5, e of Loma Novia, 4000 ft test, lcn. Humble's No. 1 L. & P. T. Wright, se sec 118, 1 mi n of Seven Sisters field, lcn. Intrepid Oil Co.'s Parr Ranch 1, sec 26, 7 mi nw San Diego, D&A 4856 ft, swabbed sw 4840-56 ft, pb 4030 ft and perf 4017-23 ft; dst show 3600 ft sw. Magnolia's J. M. Bennett 1, sec 434, abt 5 mi ne Cole field, coring 3662 ft. Marzo Oil Co.'s E. R. Hagist 2, sec 269, 480 ft e No. 1 Hagist, Hagist area, sd 2118 ft, test on bottom, machinery broke down, wait on equipment, coring 1920 ft. G. C. Porter's Midland 1, 330 ft nl and wl of sec 85, lcn. Rogers & Rogers Cuellar 1, sec 117, Hoffman area, td 2871 ft, set 7 in csg 2852 ft, Loma Novia sand 2854-71 ft, pulled liner, prep recement. Santa Clara Oil Pro. Co.'s (Atkins & O'Neil) J. F. Welder heirs 1-A, nw sec "A" out of sur 103, 6 mi e and 1 mi n of Freer, td 2921½ ft, cored Loma Novia sand 2914-21 ft, set 7 inch csg 2911 ft, swabbed show lots oil, tubing hung at 2920 ft, now sd for pumping equipment, well will not flow although fluid level near top of hole; No. 1 Book Ranch (O. G. Glasscock) in Book Ranch in Santa Cruz de Concepcion gr in extreme southeast portion of county on 9829-ac tr, 6000-foot test, dr 1650 ft. Sun and Simms' Worden & Drought 3, sur 151, set 2 joints sur csg, dr ahead. Westheimer & Daube's Z. Campos 3, sec 224, east outpost Seven Sisters field, dst 2221-30 ft, 100 ft oil, 100 ft mud, 15 min, td 2233 ft, running tubing.

EDWARDS COUNTY—Paul Teas' J. B. Stewart 1, GC&SF sec 2, 14 mi se Rock Springs, td 1026 ft, ru rotary to dd.

FRIO COUNTY—Amerada's Cory & McWilliams 1, blk 13, Jose Arocha sur No. 298, 2¾ mi sw Smith 1, dr 5250 ft; No. 5, Halff & Oppenheimer, S. Glenn Survey No. 335, Pearsall area, dr 3250 ft; No. 6 Halff & Oppenheimer, San Antonio Ditch Co. Surv No. 1104, Pearsall area, dr 2130 ft. W. D. Bacon et al's J. F. Burns 1, Thomas B. Clifton sur, sw Bigfoot, dry and abnd 3008 ft. Thorton Davis et al's Halff & Oppenheimer 1, J. D. Clare sur No. 336, 1 mi w of Pearsall field, coring 3920 ft.

GOLIAD COUNTY—Jane Oil Co.'s (Diamond Half Oil Co.) Gillett 1, J. Gomez sur, extreme western corner of county, 1 mi e North Pettus field, td 3707 ft, sand 3694-3704 ft, flowed 15 bph 3/16 ch, pb to 3703 ft, woc; No. 2 Gillette, 330 ft nwl, 990 ft swl of 745 ac tr, J. Gomez sur, 660 ft e No. 1, lcn. H. J. Porter et al's J. R. Kaufman 1, 40-ac lse, A. Trevino sur, 1000 ft e of Kaufman 1-C, Herds Creek, lcn. Port Isabel O&G Co.'s Dauderstadt 1, in Solomon Hall sur, in e end of county, 5500-foot test, dr water well. Thompson

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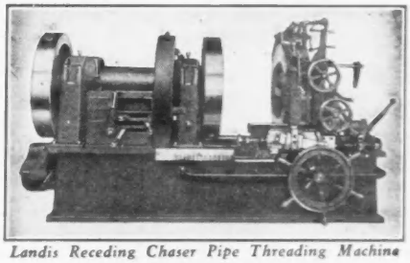

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Drlg. Co.'s J. E. Pettus 1, in Maria de Jesus y Bravo gr, 12 mi nw Goliad, ru; H. Taylor Est. 1, W. H. Smith sur, 6 mi n Goliad, td 5301 ft, abnd. Zeni Oil Co.'s (was H. T. Potter et al) Lutenbacher 1, blk 25, Goliad Townsite sur, south of Goliad, dr water well.

GONZALES COUNTY—O. M. Owensby et al's (was Forrester Oil Co.) H. B. Steen 1, N. M. Bane sur, 12¼ mi se Gonzales and 1000 ft fr road, sd 1796 ft. Tull et al's J. F. Bozka 1, 61.2-ac tr, B. McClure sur, s of Dilworth, sd 410 ft.

GUADALUPE COUNTY—Paul Armstrong's Clem Brodnaux 1, 36-ac tr, W. P. King sur, 2 mi ne Kingsbury, dr 1500 ft, shale. Clark & Gay's Waldrip 1, center 1½-ac tr in Staples townsite, G. Allen sur, sp. Eickenroht & Gallagher's O. H. Jahns 1, 840-ac tr, Green Dewitt sur, 3 mi sw South Darst Creek, Edwards lime test, ru. O. W. Killam's J. Reneker 1, in G. Chatwell sur, 3 mi sw Staples, coring 1175 ft, tcp Georgetown 1139 ft. A. C. Locke's H. Holmes 1, 26-ac tr, Cyrus Campbell sur, 2 mi n and w of Staples, dr 530 ft. R. C. Robbins' Manford 1, James Hodges sur No. 374, 1250 ft e Manford pool, sd 2581 ft. Fred G. Scott's F. P. Pooley (Walter Schultz) 1, 2 mi s Staples, dr 195 ft. H. P. Suggs & L. R. Reedy's J. H. Sherrill 1, 100-ac lse, Geo. Allen survey (1½ mi s of Staples), dr 58 ft. W. J. Walton et al's Antone Zoboroski 3, ne corner of 227-ac ac tr in Joseph D. Clements sur, ru.

HIDALGO COUNTY — Dean Brothers' George 1, tr 13, porc 41, Reynosa Juris, 7000 ft e of discovery, 700 ft n of Samfordyce production, lcn. Gerald O&G Co.'s Nelson Mortgage Co. 1, 330 ft sl and el of blk 38, lot A, La Blanca Agricultural subd, about four miles south of city of Donna, sp and sd, 6000 foot contract, Porter Drilling Co. contract. Gulf States Oil Co.'s Delta Orchards 1, lot 2, blk 73, Las Mestinas gr, sd 1675 ft; J. C. Engelmen 3, lot 3, blk 70, Las Mestinas gr, lcn. Kingwoods Oil Co.'s Osca Daskam 2, blk 30, porc 45, 10 mi ne Mission, dk. Maddox & Tatum's John H. Shelly 1, tr 48-2, porc 53, Reynosa Juris, 6000-foot test, bldg dk. Maxwell-Mundy-Morris' Southland Dev. Co. (Hidalgo County Water Control & Impr. Dist.) 1, lot 11, blk 20, Alamo Land & Sugar Co. Subd, Alamo gr, 4 mi s Alamo, sd 735 ft. Quintana Pet. Corp.'s John C. Engelman 1, e½ of lot 10, blk 94, Mestinas gr, 4 mi se of Gulf States No. 1 Engelman, due sp (2-5-36). Dayle L. Smith Oil Co.'s Fairbanks & Young 1, blk 44, porc 46, Reynosa Juris, 4 mi Samfordyce field, dr 1725 ft. Union Sulphur Co.'s ARGL&I 7, tr No. 2309, blk 59, about 4000 ft e of Mercedes field, dr 6800 ft; No. 8 ARGL Co., tr 2120, blk No. 87, N. Capisallo district, sp.

JIM HOGG COUNTY—French Oil Corp.'s E. Rodriquez 1, sh m-1, partition of Las Cuevites gr, dr 2660 ft, sw sand 2558-62 ft. S. L. Miller Oil Co.'s Yeager 1, blk 6, sur 20, td 3559 ft, old td 3559 ft, sdtr, td 3542 ft, pb 3433 ft, running 8¼ inch csg. P. H. Neilson, Trustee de la Garza 1, blk 293, Pippin sub, Randado gr, sd 610 ft. G. C. Rankin's Vela 1, blk 6, sec 5, td 1911 ft, fsh for 7 joints ds.

JIM WELLS COUNTY—Houston Oil Co. et al's E. A. Hawkins et al 2, blk 11, Putnam sub, sh 3, San Diego gr, ½ mi n disc well, San Diego field, td 3910 ft, oil show 3835-36 and 3836-40 ft; dst 3833-44 ft, 10 min, 4 joints mud, show gas, reaming. O. W. Killam's George Reynolds 1, s¼ of survey 28, J. Harper, Grantee, 4 mi w of Orange Grove, ru. Henry Mode's B. W. Owens 1, 620 ft s of center of nl of Owens 120-ac tr, J. Poitevent sur 151, ab 366, 2 mi s of Alfred, dk; G. M. Richardson's No. 1 J. E. Garrett, sec 5, N. G. Collins grant, 15 mi n of Alice near Highway 66, ru. J. E. Walsh's W. D. Wade 1, lot 3, blk 6, W. H. Bode sub, Sandia district, sd 2920 ft, may deepen to 4000 ft.

KARNES COUNTY — California Co. & Mills Bennett's J. R. MacDougal 1, Wm. Guthrie sur, 3 mi e Runge, dry and abnd 3760 ft.

KERR COUNTY—Auld & Evans' Heffner 1, sec 13, BS&F sur, dr 1325 ft. Eastland Oil Co.'s Jeff Love 7, in J. Martinez sur, sec 1594, 640-ac tr, 6000 foot test, dr 282 ft in sh. Evans & Edmiston's Will Auld 1, 418-ac tr, sec 1592, 2500 ft sw Eastland 1 Love, sp.

KIMBLE COUNTY — Forest Dev. Co.'s Stapp 1, sec 682, dry and abnd 4090 ft.

KLEBERG COUNTY—John Bartlett's Dietz 1, blk 16, sec 48, KI&T sur, 2 mi sw of Kingsville field, sd 2500 ft. Clark & Anderson's J. W. Kellam 1, 330 ft sl and el of lot 7, sec 53, KT&I sub, 2 mi se Kingsville field, dk.

LAVACA COUNTY—J. D. Aiguier et al's No. 1 A. A. Staffa, W. R. Henesy sur, 3 mi s of nl of county, spud in.

LIVE OAK COUNTY—Dirks Brothers' J. R. Dougherty 1, 330 ft nwl 960 ft nel of tr, J. Beagle sur, 6 mi w of La Garto, mim. R. H. Feltner et al's John T. Carter & Bros. 1, nw 120-ac of w 160-ac of sec 3199, T&T Ry. Co. survey in extreme sw portion of county, near Sanger Ranch test, sp. Houston Oil Co.'s Cartwright 33, 1172 ft n No. 21, 880-ac tr, Francis Botello sur, dr 1200 ft. Luray Oil Co.'s Little 1, M. M. Shipp sur, ne offset disc well in McNeill (North) field, td 5302 ft, pb 5025 ft, perf above, abnd. Ogden & Reed's D. C. Reed 1, Clegg Ranch, sw part of county, ru. Santa Clara Oil Co.'s (Atkins & O'Neil) R. H. Corbett 1, Corbett sur (center of sur), dr 3310 ft. L. W. Stieren's W. A. Smith 1, T. R. Reese sur, 6 mi e Oakville, spud in.

MAVERICK COUNTY—I. N. Boicourt's Bandera County School Land, 2550 ft sl, 3060 ft el of lease in sur No. 231, 1 mi sw of Darling, lcn. Fulwood & Marr's State Bank & Trust Co. 1, GC&SF sec 3, 2 mi n of Eagle Pass, sd 770 ft. Thompson & Streeter's Joseph Wipff 1, sec 18, 7 mi w Chittim field, 10 mi n Eagle Pass, sd 220 ft.

McMULLEN COUNTY—Thorton Davis et al's (Whisenant & Trenchard) Roos 1, sur 93, 3 mi e and n of Loma Alta field, sp. F. Daybault's Matula 1, 100-ac, James Garner sur, 2½ mi sw Calliham, td 780 ft, sand 773-80 ft. Charles A. Hall No. 2 Claunch, 200-ac tr, M. Hely sur, ½ mi s Calliham, 400 ft se No. 1, skid on. Loma Oil Jacob 1-F, in John Fadden sur, 330 ft due west of Texas Inland O&G Co. No. 1-B Lark, prep sp. Luray Oil Co.'s Glass 8, Gardner sur, Calliham area, coring 1050 ft for sand. Magnolia's Kincaid 1, sec 86, 3 mi e of Texico well, dk, mim. Stewart et al's Guy Lowe 1, Geo. Bright sur No. 21, sd 2250 ft. Stella Tiechman's J. J. Henry 1, 575-ac tr, A. Torres sur No. 21, ab 457, 7 mi w Tilden, sd 370 ft. Ike W. Taylor's H. L. Lark 1, blk 56, Lark subd, E. W. B. Scrugham sur, between Calliham and Jacob field, td 980 ft, swabbing, prep to set liner and tubing, will flow. Witherspoon Oil Co.'s Calliham 1, blk 11, M. Hely sur, lcn.

MEDINA COUNTY—Frank A. Brown's A. E. Brueks 1, John Ward sur, sd 700 ft; Mary R. Winn 1, John Ward sur, sd 60 ft. W. C. Campbell et al (Ed Falvey et al's) McMenemy 1, sur No. 331, G. Petty sur, 4 mi se Devine, td 2810 ft, comp fsh jcb.

MILAM COUNTY—R. G. Conan's H. & L. Hudson 1, 160 ft wl and 750 ft nl of 100-ac tr, S. C. Robinson sur, ru. Minerva Ref. Co.'s Shelton Est. 4, 50-ac tr, Wm. Allen gr, Minerva-Rockdale area, completed; No. 5, Shelton Estate, 150 ft sl, 330 ft e of No. 2, 50-ac tr, Wm. Allen sur, lcn.

NUECES COUNTY—D. H. Hawn's Wm. Shely 1, center of 9-ac tr about 3500 ft ne Saxet Heights field, 2220 ft due s of Chemical plant, Villareal sur, sp. Refugio Refining Co. (Garland Clymore) Jonas Weil 1, 80-ac tr, Villareal sur, 1 mi se Saxet Heights, coring 4103 ft, shale. Santa Clara Oil Co.'s (Atkins & O'Neil) C. H. Cooke 1, sec 14, Guadrilla Irrigation Co. sur, 4 mi e Driscoll, dr 1650 ft. Thompson & McGrew's A. F. Geistman 1, 120-ac tr, in J. R. Ward sur 316, offset to Nelson No. 1 Buckholt, lcn. Westgate Oil Co.'s Lynch et al 1, 150 ft nl, center el and wl of 8.3 ac lse, dr 3500 ft.

REFUGIO COUNTY — Texas Gulf Prod. Co.'s Carl Arnold 1, sec 33, Bonnie View subd, Wood Ranch, 9 mi se Woodsboro, sd 5987 ft for fuel. United Prod. Co.'s M. F. Lambert 22, blk 22, C. A. Hardwick sur, elev 65 dd, td 6538 ft, cored sw sand 6502-38 ft, sd for orders; M. F. Lambert 23, tr 21, C. A. Hardwick sur, lcn.

SAN PATRICIO COUNTY—Argo Royalty Co. and Willis Storm's Nancy Hobbs 1-A, 215 ft nw No. 1 Delgado gr, 1 mi s Mathis, digging pits, wait on rig. Humble's J. W. Goodwin 1, lot 1, sec 23, third addition, Taft Farm Lands, dr 5010 ft; No. 2 Goodwin, 1044 ft wl, 330 ft sl, 210-ac tr, Taft Farm land, sec 23, lcn. Geo. E. Smith et al's J. L. Britton 2, 660 ft due e No. 1, blk 8, sec 5, third addition Taft Farm lands, sd 4932 ft for orders. Hiriam Reed et al's 1, R. Svedlenak, lot 1, sec 5, first add. Taft Farm Lands, 1½ mi s Taft discovery, ru, laying water line. Stanolind's Alamo Iron Works 1,

lot 17, Patrick Fitzsimmons sur, 3 mi sw Sinton, dry and abnd 6676 ft; Floerke 1, lot 5, blk 17, first addition Taft Farm lands, 4 mi s and e of Taft field, dr 935 ft. Texon Drlg. Co.'s R. L. Rambo 1, lot 6, sec 35, fourth add. Taft Farm Lands, ½ mi e of s end of Plymouth field, mim.

STARR COUNTY—Ash & Tackett's R. E. Margo 1, blk 4, sh 3-B, porc 70, Juris of Mier, sd 378 ft. O. G. Borah et al's V. C. de Guerra 1-A, sh 92, porc 68, 2 min of Roma, dr 260 ft. John H. Clopton's Kelsey Bass 1, center sec 357, 8 mi s of Cuevitas, dr 1865 ft; No. 2 A. K. Bass, 1850 ft swl, 2950 ft nwl of sec 377, 1½ mi s No. 1 Bass, lcn. Coreta Pet. Co.'s J. H. Burnett (Haden et al) 1, sh 47, porc 80, dr 1500 ft. Griffin & Kimbrough's Guerra 1, sh 298, porc 69, n of Mier, lcn. Harter & Maynew's Sanchez 3, sh 69, porc 72, n Roma, sd 512 ft. Marc Jenkins' Wm. Martin 1, sec 627, 13½ mi ne of Rio Grande City, dr 775 ft. A. F. Vannoy et al's (Marc Jenkins et al), H. Garza, Jr., 1, blk 10, sh 26, porc 70, nw of Roma, td 910 ft, sd, contract depth. A. J. Weyel's Wardner 1, 160-ac tr, porc 84, td 2040 ft, blew out making gas, salt water, still running wild. Otto W. Woods H. P. Guerra 1, lot 35, Conroe subd, porc 55, Mier Juris, lcn.

TRAVIS COUNTY—Albrecht & Brinkrueger, Sr., M. C. Swenson 1, 750 ft sel, 850 ft nel of 75-ac tr, L. Kimbro League, sec 5, drlg. Richey & Lungren 1, 330-ac tr in Kimbro sur, in blk 14, sd 410 ft. Walden Oil Co.'s P. C. Willis Est. 1, 579 ft sl, 581 ft wl of 40-ac tr, J. Kemp sur, dr 600 ft.

VICTORIA COUNTY — Gillespie & Superior's Henderson & Pickering 1-B, blk 93, SA &MG Ry. sur, ab 308, 1 mi w of production, sp and set 830 ft of sur csg, woc. S. A. Guiberson & Chas. Pettit's Oscar Wedemier 1, 406.82-ac tr, Jose Carabajal sur, 4 mi nw of Victoria, dr 2365 ft. Rowan & Hope's A. W. Scheel 1, Scheel 195-ac tr in J. N. Esalera gr, lcn. S. C. Yingling's Jacob Stehle 1, 15-ac tr, P. Gallardo sur, ab 32, 1 mi sw of Coleto Creek field, dr 1410 ft.

WEBB COUNTY—Foster Barneley's C. H. Webster 5, ne¼ of sw¼ of sur 684, td 3000 ft, set whipstock and milling out at 2400 ft after losing hole at 3000 ft. Mills Bennett's M. de Perez 1, s 1/3 of w½ of sur 709, drlg 2950 ft. D. E. C. Oil Co.'s Slator Ranch 1, blk 29, Mission Oil Co. subd, Slator Ranch, J. S. Borrego gr, sd 2624 ft. O. W. Killam's Ortiz Ranch 1-A, 50 ft n No. 1, porc 17, 6 mi nw Laredo, dry and abnd 2318 ft; No. 44 Brumi, 330 ft sl, 75-70 ft el of sur 586 comp 20 million cu ft gas per day, 500 lbs RP, td 1811 ft. Payne & Martinez's Mrs. M. P. Perry 1, sur 771, lcn. S. Reavis's Webster 1, nw ne sec 684, 1 mi e Carolina-Texas field, coring 4935 ft. S. S. & B. Oil Co.'s Lone Star Construction Co. 9 (now Lutex Oil Co.), porc 12, ¼ mi nw of Laredo, dr 1645 ft. Superior Oil Co.'s A. S. Billings 1, sec 7, 1 mi w Lopez field, dr 2565 ft. W. H. Vernor, Tr.'s Jefferies Ranch 1, blk 13, sec 1453, 30 min nw Laredo, dr 995 ft. A. H. Wray's Geo. Steumpke 1, sh 1, Brewster Pasture, Joaquin Galan gr, sd 1678 ft.

WILLIAMSON COUNTY — Fuchsbricker No. 1, 2150 ft swl, 1350 ft sel of Mahon sur, dr 925 ft. Glass Bros.' A. Albert 1, P. Coursey sur, sd 785 ft. H. E. Goff's Chas. Patschke 1, 110-ac tr in Foley sur, sd 255 ft. Maude Kelley's Paul Horn No. 1, on 56-ac tr in John Bevil sur, 6 mi e Lockhart, drlg. G. A. Ripley 1-A, Muery, (second hole), dry and abd 1010 ft.

ZAPATA COUNTY — Murt Cullinan's E. Gutierrez 1, blk 4, sh 2, Fansler Partition Comitas gr, 2 mi Escobas field, dr 1800 ft. J. W. Magee's Bruni 1, blk 45, Blas Uribe tr, J. V. Borrego gr, abnd 2308 ft. J. J. O'Hern et al's S. Neal 1, blk 3, porc 27, 7 mi ne of Charco Redondo field, dr 2210 ft.

ZAVALLA COUNTY—W. L. Bridges' E. B. Flowers 1, 1320 ft nl and wl sec 19, blk 1, I&GN RR sur, lcn. Frank Buttram et al's Whitecotton 1, B&M sur No. 1, dk. Leona Oil Corp. & Witherspoon Oil Co.'s Geo. West 1, C. Bustillo sur No. 1, lcn.

TEXAS GULF COAST

BRAZORIA COUNTY—Gulf's Fairfield 1, Sandy Point prospect, A. Robeson sur, dr shale 1373 ft.

BURLESON COUNTY—Carl Dyer et al's Young 1, s of Caldwell, J. Bird sur, abn 1740 ft. Walter Blumenthal's Crain 1, se of Rockdale, W. C. Pierce sur, sd 3490 ft.

CHAMBERS COUNTY — Black Gold Pet. Co.'s Barrow 1, Jackson Lake prospect, R. Barrow sur, dr shale 6805 ft.

COLORADO COUNTY — Coyle-Concord's Powell 2-B, Garwood area, I&GN sur, sec 45, dr sand and shale 6411 ft.

GALVESTON COUNTY — Sun's J. E. Hughes 1, Green Lake prospect, W. C. M. Baker sur, dr heaving shale 7995 ft.

HARDIN COUNTY—Republic Prod. Co.'s Burrell Fee 1, n of Silsby, A. A. Burrell sur, dr shale 6945 ft.

HARRIS COUNTY—A. C. Hill's Swilley 1, Sheldon prospect, Victor Blanco sur, washing to bottom at 6891 ft; same operator's Swilley 1-B,Victor Blanco sur, sd 7566 ft. Texas Gulf Production Co.'s Westmoreland 1, Bellaire prospect, J. B. Pier sur, dr shale 8564 ft. Cockburn Oil Corp.'s Thompkins 1, Burnett Bay prospect, N. Lynch sur, dr shale 4065 ft.

JEFFERSON COUNTY — Humble's E. Langham 1, Amelia prospect, C. Williams sur, woc 6777 ft. Sun's Broussard 1, Labelle prospect, B. Blackmon sur, dr shale 8335 ft. Tatum & Pendigrass's Owens 1, n of Port Arthur, washing to bottom at 1850 ft.

MATAGORDA COUNTY — Continental's Feife 1, Citrus Grove prospect, J. S. Chriswell sur, cutting and pulling at 7541 ft. John Deering's Estille et al 1, Cedar Lane prospect, Tone & Jamison sur, sd 6525 ft. Hammon Exploration Co.'s Cleveland 1, one and half mi se of Bay City, E. Hall sur, dr shale 8084 ft. Helmerick & Payne's Hawkins 1, Sheppards Mott, D. A. McCarthy sur, swabbing salt water 7816 ft. Sterling's Baer 1, sw of Sargent, S. Holt sur, sd 6010 ft. Sun's Craig 1, s flank of Hawkinsville dome, T. Williams sur, dr rock 5064 ft.

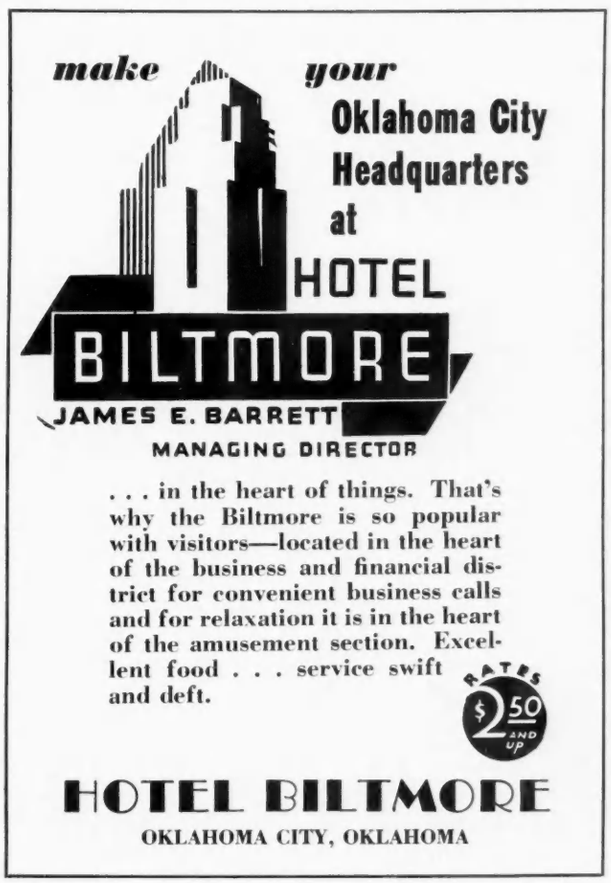
MONTGOMERY COUNTY — N. C. Battaille's D. H. Caswell 1, 4 mi s of Conroe field, D. Davis sur, dk. Jack Frazier's Maxey 1, Goodwin area, James Brown sur, dk. Chapman & Smith's Delta Land 1, Dacus area, T. Sheppard sur, dr water well. West Prod. Co.'s Foster Lbr. Co. 4, se of Conroe, T&NO sur No. 4, dr shale 4518 ft.

ORANGE COUNTY—Blue Line Oil Co.'s Peet 1, n of Orange, R. Ballew sur, dr shale 2695 ft.

POLK COUNTY—J. T. Lightfoot's Davidson 1, ne of Corrigan, dr shale 500 ft.

SAN JACINTO COUNTY — Cockburn's Cruse 1, Reno prospect, H&TC sur No. 103, dr shale 5338 ft; same operator's K. Moore 1, n of Rayburn, J. F. D. Rumayor sur, fsh 4718 ft. C. Gholson & L. Decker's Randolph 1, Evergreen area, V. Flores sur, dk. Ralph Stern & Gulf's R. B. Love Est 1, nw of Cold Springs, D. McGee sur.

WALKER COUNTY—Nueva Petrolia Co.'s Tonty Lbr. Co. 1, New Waverly area, J. C. Harrison sur, dr shale 3114 ft.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This Week with the Industry's EQUIPMENT SUPPLIERS

Baker Oil Tools To Build Houston Plant

Baker Oil Tools, Inc., Huntington Park, California, will immediately begin construction of the first unit of a manufacturing plant in Houston. R. C. Baker, president, has been in Houston for several weeks and has just purchased from Mrs. Mellie Esperson a six-acre tract just west of the National Supply Company's new plant on Navigation Boulevard. For the past ten years Baker Oil Tools, Inc., has been represented in Houston, with W. A. Davis as district manager. They are now located at 2301 Commerce Street, with an office and warehouse in charge of Walter M. Cooney.

Shand and Jurs Locate in Houston

Shand and Jurs has opened its Houston offices at 921 Shell Building, with Joseph Z. Hertzler in charge. The company, which has headquarters in Berkeley, California, is an engineering and manufacturing concern of a full line of fittings for handling and storing petroleum and other liquid products.

Smith Assistant Sales Manager Republic Rubber

G. L. Smith has been appointed assistant sales manager of The Republic Rubber Company, Youngstown, Ohio.

Smith has been with the company 13 years, coming to the organization on January 1, 1923, as salesman in Eastern and Northern New York, which territory was gradually enlarged to include all of New England and the New York metropolitan area. He has made an enviable record as a salesman, having placed more accounts on the books of the company than any other field man in the organization, according to H. P. Schultz, sales manager, who says further, "His promotion is the result of ability and integrity, and his experience and training have admirably fitted him for his new enlarged duties."

G. L. SMITH

S. C. Partridge Advanced by Timken

The Timken Roller Bearing Company, Canton, Ohio, has appointed S. C. Partridge assistant general manager of the industrial division, with headquarters in Canton. Partridge graduated from the Engineering School of McGill University in 1925, spending the next four years in the field on engineering work for the government. He joined the Timken organization in 1925, working first in the shop and then in the engineering department, where he secured a thorough training in the manufacture of Timken Bearings as well as their application to all types of equipment.

In 1926 Partridge was sent to Buffalo, where he has charge of the Timken industrial district office for the next two years, going to Toronto in 1928, where he was made manager of The Timken Roller Bearing Company, Limited, in charge of both automotive and industrial sales. His next advance was to the Detroit office of the company, where he assisted E. W. Austin, general sales manager, automotive division, which position he has filled until his present appointment as assistant to W. B. Moore, general manager of the industrial division of The Timken Roller Bearing Company.

Link-Belt St. Louis Offices Are Enlarged

Link-Belt Company has moved its district sales offices in St. Louis, Missouri, from 3638 Olive Street, to larger quarters at 1018-21 Louderman building, 317 N. 11th Street. Howard L. Burdon is district sales manager.

The S. M. Jones Company Announces Personnel Changes

The S. M. Jones Company announces that effective February 1, C. E. Buchner, Jr., is transferred from the field engineering department to the Houston division office where he will act as sales engineer under direction of L. J. Pundt, division manager. Buchner is a graduate in petroleum engineering from the University of Tulsa and has had two years experience in the engineering department of one of the large oil companies in addition to his more recent work with The S. M. Jones Company. He has had a wide experience in pumping conditions effecting sucker rods, having been responsible for many well studies compiled in the field engineering department of the company.

Announcement also is made of the employment of W. F. Slater, who will be attached to the field engineering department. Slater studied petroleum engineering at Oklahoma University and has also had two years experience in field pumping conditions.

L. S. ALLEN

L. S. (Spider) Allen, formerly district manager for Naylor Pipe Company in Tulsa, has joined National Tank Company, taking full charge of sales and distribution of Tite-Line Couplings. He was with Naylor Pipe Company for eight years and has been associated with pipe line construction for many years. He will make headquarters in Tulsa.

C. E. BUCHNER

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in the field

Our own experience with Humble products in actual oil field use makes us believe that you'll like them; and this is backed by the experience of many other producing companies. But your own test in the field is the most convincing proof of satisfactory service. So we ask you to try Humble Products, to test them thoroughly. We're confident that you'll come back for more.

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In sizes ⅛" through 2".

Valves trimmed with "EValloy" Stainless Steel

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Section "G" of Catalog No. 11, just out, covers complete details.

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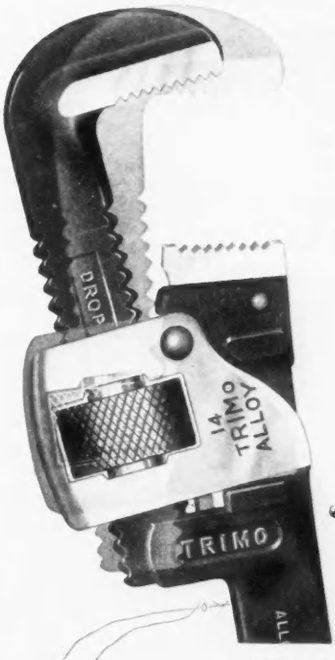
the PIPE WRENCH *with* *Ratchet Action*



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The Red Tag is always wired to every TRIMO Pipe Wrench.

New TRIMO ALLOY PIPE WRENCH

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ROXBURY (BOSTON) MASS.

Squeaks from the Bull Wheel

Alright! Alright!

And why do you think I should be lenient with you?

It's my lawyer's first case.

Truthful Now

"Aunt Chloe," said the house guest, "they tell me you remember the War of 1812."

"No, sah," said Aunt Chloe. "I used to remember it, but I done forget it since I got religion."

Linguist

Mrs. Newrich—Oh yes, our little Henry is turning out very smart in school.

Caller—And what is he studying?

Mrs. Newrich—Why, he's studying French, and Spanish, and algebra. Henry, say "good morning" to the lady in algebra..

Rest in Peace

The Irish foreman found one of his men sleeping in the shade.

"Slape on, ye idle spalpeen," he said, "slape on. So long as ye slape ye've got a job; but whin ye wake up, ye're out of wurrk."

On Your Way

They had been sitting in the swing in the moonlight alone. No word broke the stillness for half an hour until "Suppose you had money," she said, "what would you do?"

He threw out his chest in all the glory of young manhood. "I'd travel." He felt her warm, young hand slide into his. When he looked up she had gone. In his hand was a nickel.

Different

Husband: "Why this very sudden change, dear? Only this morning you said you loved every hair on my head."

Wife—"Yes, but that doesn't include every hair on your shoulder."

"Is this candy pure?"

"As pure as the girl of your dreams, sir."

"Gimme a pack of gum."

Man and Mule

The mule, he is a gentle beast; and so is man. He's satisfied to be the least; and so is man. Like man, he may be taught some tricks; he does his work from eight to six; the mule, when he gets mad, he kicks; and so does man.

The mule, he has a load to pull; and so has man. He's happiest when he is full; and so is man. Like man, he holds a patient poise, and when his work's done will rejoice. The mule, he likes to hear his voice; and so does man.

The mule, he has his faults, 'tis true; and so has man. He does some things he should not do; and so does man. Like man, he doesn't yearn for style, but wants contentment all the while. The mule, he has a lively smile; and so does man.

The mule is sometimes kind and good; and so is man. He eats all kinds of breakfast food; and so does man. Like man, he balks at gaudy dress, and all outlandish foolishness. The mule's accused of mulishness; and so is man. —St. Louis Globe-Democrat.

'Nuff Sed

Old lady, to benevolent looking old gentleman—pardon me, sir. Are you a minister?

B. L. O. G.—What the hell did you say?

O. L.—Nothing.

Reassuring

"Here's a letter from your wife, saying you are the father of a ten-pound boy."

"Does she say anything else?"

"That's all, except at the end of the letter she says, 'truly yours'."

Fairy Tale

"I am afraid we have nothing open just now. May I ask why you left your last place of employment?"

"Why-er, ah, to be perfectly frank, it was because I was caught kissing my employer."

"Ah, so that was it! And when do you think you could start working here?"

Sounds Funny But Makes Sense

The dear vicar's wife had just died, and in consequence he wished to be relieved of his duties for the week-end, so he sent the following message to his bishop:

"I regret to inform you that my wife has just died, and I should be obliged if you could send me a substitute for the week-end."

Loquacious Romeo

"Elmer—Elmer, do you love me?"

"I'll say."

"Do you think I'm beautiful?"

"You bet."

"Are my eyes the loveliest you've ever seen?"

"Shucks, yes."

"—my mouth like a rosebud?"

"You know it."

"—and my figure divine?"

"Uh-huh."

"Oh, Elmer, you say the nicest things! Tell me some more."

Sympathetic

Prof.—If there are any dumbbells in the room, please stand up.

A long pause and then a lone freshman stands up.

"What, do you consider yourself a dumbbell?"

"Well, not exactly that, sir, but I hate to see you standing all alone."

One For Doc

"I say, doctor, did you ever doctor another doctor?"

"Oh, yes; quite often."

"Well tell me this: Does a doctor doctor a doctor the way the doctored doctor wants to be doctored, or does the doctor doing the doctoring doctor the other doctor in his own way of doctoring?"

Knows the Old Man

Senior—I had great fun at the club last night. They had a beer-drinking contest.

Junior—You don't say. Who won second prize?

Fast Workers

Head of Business College: "In teaching shorthand and typewriting, we are strong for accuracy."

Inquirer: "How are you on speed?"

Head of Business College: "Well, of last year's class, six married their employers within six months."

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GOTT Water Cans are the practical way to keep drinking water cool for long periods, protected from impurities and always handy to the job. Snug fitting large removable top, strongly built to withstand rough usage. GOTT Water Coolers have extra large covers and a handy non-leaking push button faucet. Your Supply Store has them, get one today! . . . . . .
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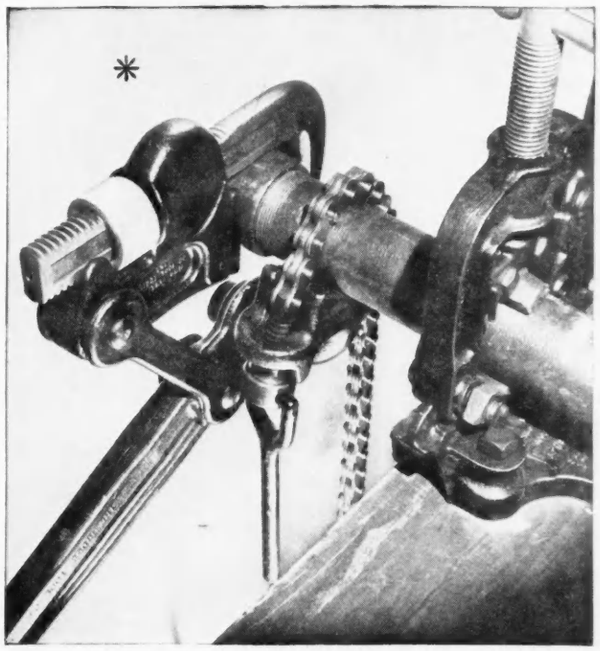

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INDEX TO ADVERTISERS

A

Page

J. S. Abercrombie Co. —
Abercrombie Pump Co. —
Allsteel Products Manufacturing Co. —
Alten's Foundry & Machine Co. —
American Askania Corporation —
American Association of Petroleum Geologists —
American Cable Co. —
American Hammered Piston Ring Co. —
American Hoist & Derrick Co. —
American Iron & Machine Works —
American Lubricator Co. —
American Meter Co. —
American Roller Bearing Co. —
American Rolling Mill Co. —
American Sand-Banum Co. 76
American Seismograph Co. 84
American Steel & Wire Co. 4
Alexander Anderson —
B. K. Appleman —
Armstrong Brothers Tool Co. —
Ash Grove Lime & Portland Cement Co. —
Athey Truss Wheel Co. —
Atlas Powder Co. —
Axelson Manufacturing Co. 89
Axtell Co. —

B

Baash-Ross Tool Co. —
Badgett Steam Lubricator Co. —
Baker Oil Tools, Inc. 3
Baldwin-Duckworth Chain Corp. —
Baldwin-Southwark Corp. —
Baroid Sales Co. —
The Barrett Co. —
William M. Barret, Inc. 84
Beaumont Iron Works —
Biltmore Hotel 85
Black-Sivalls & Bryson —
Bowen Air Lines —
Bradford Motor Works —
Brance-Krachy Co. —
Brauer Machine & Supply Co. —
The Brewster Co. —
Bridgeport Machine Co. 14
Broderick & Bascom Rope Co. 35
Brown Tool Co. —
Buck & Stoddard, Inc. —
E. D. Bullard Co. —
A. M. Byers Co. —
Byron Jackson Co. —

C

Cameron Iron Works 49
Carson Machine & Supply Co. —
The Cavins Co. —
Chain Belt Co. —
Chemical Process Co. —
Clark Brothers Co. —
Columbian Steel Tank Co. —
Continental National Bank —
Continental Oil Co. —
The Continental Supply Co. —
Fred E. Cooper Co. —
Cooper-Bessemer Corp. —
The Corbett Corp. —
W. H. Curtin Co. —

D

Darling Valve & Manufacturing Co. —
The Dayton Rubber Manufacturing Co. —
Dean Core Barrel Manufacturing Sales and Service —
Demag, A. G. —
Diamond Metal Co. —
David Donoghue 84
Dowell Incorporated —

E

Eastman Oil Well Survey Co. of Texas —
Economy Electric Lantern Co. —
Elliott Core Drilling Co. —
Emsco Derrick & Equipment Co. —

F

Geo. E. Failing Supply Co. —
First National Bank of Fort Worth —
First National Bank and Trust Company of Tulsa —
The Edwin H. Fitler Co. —
Foote Bros. Gear & Machine Works 81
Fort Worth Laboratories 84
Fort Worth National Bank —
Frick-Reid Supply Corp. —

G

Gardner-Denver Co. —
The Garlock Packing Co. —
Gaso Pump & Burner Mfg. Co. —
Gas Power, Inc. —
General Electric Co. —
L. H. Gilmer Co. —

Page

Globe Oil Tools Co. —
Goodall Rubber Co. of Texas —
B. F. Goodrich Rubber Co. —
Goodyear Tire & Rubber Co. —
H. P. Gott Manufacturing Co. 88
Grant Oil Tool Co. —
Gray-Kerotest —
Gray Tool Co. —
The Guiberson Corp. —
Gulf Envelope Co. —
Gulf Publishing Co. Third Cover
Gulf States Utilities —
Gustin-Bacon Manufacturing Co. —

H

Hall & Lowrey, Inc. 72
Halliburton Oil Well Cementing Co. Fourth Cover
Hamilton Brothers —
Hardway & Cathey 84
Harnischfeger Sales Corp. —
Harrisburg Steel Corp. —
Haynes Stellite Co. —
Hazard Wire Rope Co. 31
C. M. Heeter Sons Co. —
Hercules Motors Corp. —
Hercules Tool Co. —
Hewitt Rubber Corp. —
Hoard Exploration Co. 84
Houston Oil Field Material Co. —
Houston Ready-Cut House Co. —
Hughes Tool Co. First Cover
Humble Oil & Refining Co. 87
Hyatt Roller Bearing Co. —
Hydril Co. —

I

Independent Exploration Co. —
Independent Pipe & Supply Co. —
Ingersoll-Rand Co. —
International Cement Corp. —
International Derrick & Equipment Co. Third Cover
International Harvester Co. —
The International Nickel Co. 23
International Petroleum Exposition 47

J

Byron Jackson Co. —
Jarecki Manufacturing Co. —
Jefferson Hotel 85
The Jeffrey Manufacturing Co. —
Jensen Brothers Manufacturing Co. —
J. L. Johnston Well Testing Service —
S. M. Jones Co. —
Jones & Laughlin Steel Corp. —

K

Kerotest Manufacturing Co. 45
Kibele Manufacturing Co. —
Kobe, Inc. —

L

Landis Machine Co. —
Larkin Packer Co. —
The Lane Wells Co. 70
Laughlin-Simmons & Co. —
Layne & Bowler Co. 78
M. J. Lewis Oil Well Service —
The Lincoln Electric Co. —
Link Belt Co. —
Neal Lucey Co. —
Ludlow Valve Manufacturing Co. —
Lufkin Foundry & Machine Co. —

M

M. & V. Tank Co. —
MacClatchie Manufacturing Co. —
Maintenance Engineering Corp. 87
D. S. Mair Machinery Corp. 83
Maloney Tank Manufacturing Co. —
Manufacturers Supply Co. —
Martin-Decker Corp. —
F. G. Masquelette & Co. —
E. M. Mayfield —
McAlpin Hotel —
J. H. McEvoy & Co. —
McIntosh & Seymour Corp. —
Geo. S. Mepham Corp. —
Merco Nordstrom Valve Co. —
Miller Sand Pump Co. —
Mission Manufacturing Co. 29
Lee C. Moore & Co. —
Muskogee Iron Works —

N

National Bank of Tulsa —
The National Supply Co. 17
National Tank Co. —
National Tube Co. —
Naylor Pipe Co. —
New Deal Specialty Co. —
Norvell-Wilder Supply Co. —

O

Page

Walter O'Bannon Co. —
Oil Center Tool Co. 58
Oil City Brass Works —
Oil Development Co. of Florida 84
Oil Equipment & Engineering Exposition —
Oil Well Supply Co. —
Osage Metal Co. —
Oster-Williams —
Otis Pressure Control, Inc. —

P

The Parkersburg Rig & Reel Co. 6
Patterson-Ballagh Corp. —
Pelican Well Tool & Supply Co. 73
Petroleum Electric Power Club —
Petroleum Rectifying Co. —
Picadilly Hotel 71
The Pierce Governor Co. —
Pittsburgh Equitable Meter Co. —
Pittsburgh Steel Co. —
Portable Rig Co. 43
Producers Supply & Tool Co. —

R

J. P. Ratigan Co. —
Raybestos Manhattan, Inc. —
Reading Iron Co. —
Rector Well Equipment Co. —
Reed Roller Bit Co. —
Republic Portland Cement Co. 27
The Republic Rubber Co. 25
The Republic Steel Corp. 21
Rice Hotel —
Norman H. Ricker 84
The Ridge Tool Co. 89
Dewey T. Ross, Inc. —

S

Scandinavia Belting Co. —
J. A. Schley —
Schlumberger Well Surveying Corp. —
Seismic Explorations, Inc. —
J. F. Shaffer Co. —
Shaffer Specialty Co. —
Shaffer Tool Works —
Shand & Jurs Co. —
Shell 39
Sinclair Refining Co. —
SKF Industries, Inc. —
A. O. Smith Corp. —
E. M. Smith Co. —
Nowery J. Smith Supply Co. 84
South Chester Tube Co. 41
Southern Engine & Pump Co. 45
Southern Pacific Lines —
Southern States Co. —
Spang, Chalfant & Co. —
Sperry-Sun Well Surveying Co. 74
Star Drilling Machine Co. —
Stone Oil Tool Co. —
Stoody Co. —
Superior Gas Engine Co. —

T

Taubman Supply Corp. —
Templeton, Kenly & Co. 83
Texas Electric Steel Castings Co. 71
Texas Iron Works —
Thermoid Rubber Co. —
Thornhill-Craver Co. —
The Timken Roller Bearing Co. 13
Titusville Iron Works Co. —
Treolite Co. —
Edgar Tobin Aerial Surveys 67
Trimont Manufacturing Co. 87
Twin Disc Clutch Co. —

U

Union Carbide & Carbon Corp. —
Union Wire Rope Co. Second Cover
United States Rubber Products, Inc. —
United States Steel Corp. 4
U. S. Tool Corp. —

W

Waukesha Motor Co. 69
Westinghouse Electric & Mfg. Co. —
The Wheland Co. —
Wickwire-Spencer Steel Co. —
Williams Brothers, Inc. —
C. K. Williams & Co. —
J. H. Williams & Co. —
Williamsport Wire Rope Co. —
Wilson-Snyder Manufacturing Co. —
Wilson Supply Co. —
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Y

Youngstown Sheet & Tube Co. —

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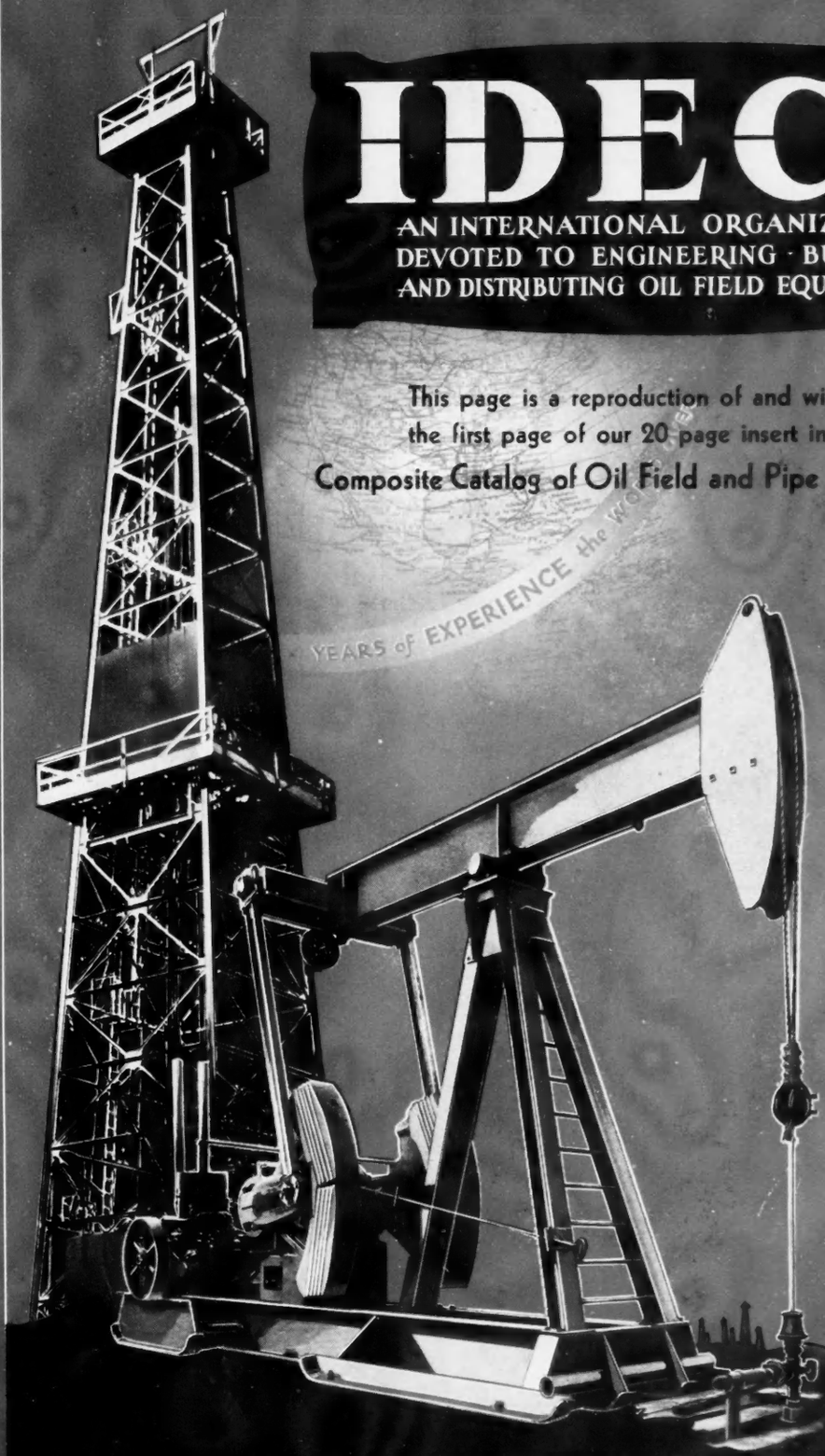

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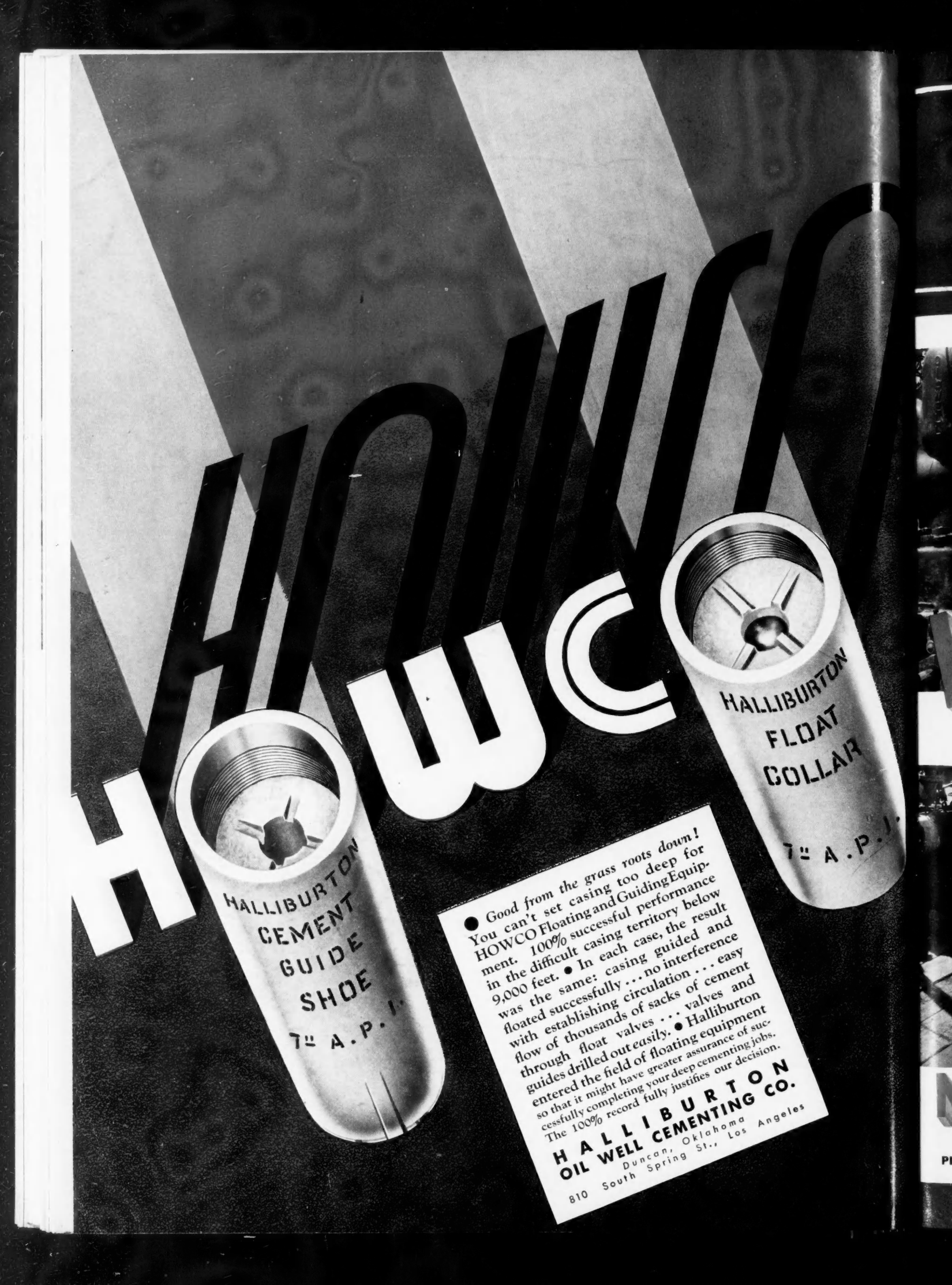
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